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ABSTRACT

This report discusses the structures, procedures, outcomes, and evaluation of the Tier One Project (TOP), which was conducted at Los Medanos College from July 1981 to February 1983 to develop general education courses embodying humanities concerns. Background to the project is provided first, delineating TOP's objectives of examining general educaton assumptions; making the humanistic spirit more pervasive in the general education curriculum; producing a series of interrelated course outlines; and completing the integration of a model general education program. The next section describes project activities for each of the following phases: (1) Pre-project (i.e., organization and planning); (2) Phase I (i.e., criteria development and formation of a study group and advisory committee); (3) Phase II (i.e., course restructuring, preparation of course outlines by faculty, formation of a general education committee, and application of criteria); (4) Phase III (i.e., teaching and refinement of course outlines); and (5) Post-project (i.e., evaluation and dissemination). The next section describes the evaluation process and findings for each phase of the project; faculty, student, and external evaluation; and project conclusions. Finally, the impact of TOP and its current status are discussed. The bulk of the report consists of appendices providing detailed information on the general education courses, a site visit report, four course outlines, and evaluation findings. (LAL)

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FINAL REPORT

NATIONAL ENDOWMENT FOR THE HUMANITIES

TITLE:

AN IMPLEMENTATION PROJECT TO COMPLETE THE INTEGRATION OF AN INTERDISCIPLINARY GENERAL EDUCATION MODEL PREDICATED ON CERTAIN HUMANISTIC ASSUMPTIONS

by

Chester H. Case

JC 830 351

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FINAL REPORT TO THE NATIONAL ENDOWMENT FOR THE HUMANITIES

Project Title

AN IMPLEMENTATION PROJECT TO COMPLETE THE INTEGRATION OF AN INTERDISCIPLINARY GENERAL EDUCATION MODEL PREDICATED ON CERTAIN HUMANISTIC ASSUMPTIONS

Log Number: ED 20036

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May, 1983

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I. INTRODUCTION

This is the final performance report for a project designed to complete a general education model based on humanistic assumption. This project spanned a little more than three semesters, from July 1, 1981 until February 28, 1983. This project involved eighty full and part time faculty, vocational as well as general education, and almost all of the college administrators.* All full time general education faculty, almost half of the total faculty (22 of 45) were involved in developing criteria and preparing course outlines, as were numerous part time faculty. Other faculty were involved in project related activities, such as college wide retreats, deliberations on college policy, and as members of committees. In all, some 50 faculty were involved in the project, of whom 24 wrote course outlines. In addition to the project director, the college president and the four area deans were continually and deeply involved. The outcomes of the project have been as projected in the grant application. There is now a set of truly general education courses, integrated, interdisciplinary structured to satisfy eight demanding criteria, and embodying humanities concerns. These courses complete the three tiered Los Medanos College general education programs. The completion of the program was accomplished by processes that maximized the commitment of the teaching faculty and administrators to the program and its philosophy.

The structure, procedures, outcomes and evaluation of this project, known at Los Medanos College as the Tier One Project (TOP) will be reported and discussed in the narrative and appendices that follow. First, the background of the project will be sketched in, to be followed by an account of the major activities of the project. Then, the impact and status of the project will be reported before turning to its evaluation. The extensive and exhaustive report of the principal external evaluators will be included in full in order to convey the complexities of the program, its successes and problems. The narrative portion will conclude with a consideration of the impact and status of the project. The numerous appendices will add depth and detail to the narrative. As requested by the NEH Grants Office, a complete set of the course outlines created by the project are included in this report. For reasons of bulk, they have been complied in a separate, companion volume.

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*See appendix AA

II. BACKGROUND

The purpose of the Tier One Project (TOP) has been to complete an humanistically oriented general education model by developing a set of integrated courses for the first level in Tier One. (See Appendix A for a schematic and explanation of the structure of the Los Medanos College general education program.) To accomplish this task, the project applied knowledge and experience gained in The National Endowment for Humanities funded pilot project which developed Tiers Two and Three. More specifically, the objectives on the project proposed in the grant application were, briefly stated:

1. Examine general education assumptions and recognize them, as appropriate, in general education courses (see Appendix B for the listing of assumptions.)

2. Make the humanistic spirit more pervasive throughout the general education curriculum.

3. Produce a series of interrelated, teachable course outlines from across the curriculum for Tier One.

4. Complete the integration of a model general education program, suitable for dissemination.

To operationalize these broad objectives, the Tier One Project postulated the following objectives: (a) to develop criteria to define a general education course, (b) to restructure existing courses or create new Tier One courses to satisfy the criteria, (c) to test teach and refine the Tier One courses. In chronological order, the major activities proposed to accomplish project objectives were as follows:

1. Pre-Project, Spring 1981: Introduce, organize, plan. College wide retreat.
2. Phase I, Fall 1981: Examine assumptions, develop criteria for general education courses. Establish Tier I Study Group. Establish Advisory Committee.
3. Phase II, Spring 1982: Restructure courses in light of general education criteria. Faculty write course outlines. Establish General Education Committee. Apply Criteria.
4. Phase III, Fall 1982: Test teach and further refine course outlines. Curriculum development workshops. General Education Committee judge satsifaction of criteria by course outlines.

5. Post-project:	Complete evaluation, prepare performance report, plan and organize for future. Dissemination.

III. PROGRAM ACTIVITIES

In what seemed to be an all too brief period of three semesters bracketed by pre- and post-project activities, TOP accomplished a great deal. All objectives were met. Since the project was essentially a curriculum development project, a great deal of its activity involved the work of numerous faculty members and administrators as they researched, deliberated, wrote, taught, evaluated, and re-wrote course outlines, in addition to participating in program activities such as workshops and seminars. These activities will now be described by project phases.

Pre-Project

In May 1981, a day long, college-wide off-campus retreat was held to explain and inaugurate TOP. Full and part-time, general education and vocational faculty were invited to participate in the TOP Study Group, the aim of which was to develop the Tier One criteria in Fall 1981. Seventeen faculty from a variety of teaching fields responded to the invitation. (See Appendix C for the roster of the study group and their teaching fields.) These faculty, plus the four Deans and the project director made up the study group. Project planning and organization took place in this phase.

Phase I

The main activity for Phase I, Fall 1981, was the examination of assumptions and development of Tier One criteria and a process for their application in judging proposed Tier One courses. Essentially, the task was to develop a list of criteria, or standards of measurement, which could be literally laid up against a proposed course outline, template fashion, to determine if a course were or were not a general education course in respect to its goals, objectives, content and pedagogy.

The process of developing criteria began with a day long workshop held prior to the opening of Fall classes. Clarification of purposes, team building, and review of LMC's existing general education program and assumptions preceded a session in which a long list of items was generated in response to the questions, "What ought a student learn in an LMC general education course?" The sixty-six items thus generated eventually were distilled down to the eight criteria approved as college policy four months later.

During the Fall, the TOP Study Group met twelve times, including one day-long, off-campus retreat. Their deliberations were fed back to the college as a whole, which eventually voted on the product of its labor, the position paper on criteria.

In order to develop "ownership" in the eventual criteria and the general education program, and to achieve a set of criteria that would be realistic and workable and yet challenging in the context of LMC, its student clientele, and its resources, an incremental "grassroots" process was used. Successive drafts of the criteria were prepared, critiqued, revised, and cycled back through the group. In the course of these cycles, key issues of definition, philosophy, and implementation were raised, debated and resolved. All five of the assumptions postulated in the grant proposal were recognized as essential in general education courses. With the exception of "world view," all were built directly into the criteria, and "world view" indirectly.

The tangible outcome of the process was a position paper on Tier One Criteria and their application. (See Appendix D for the complete paper.) These are the eight criteria:

A. Intra-disciplinary
B. Modes of Inquiry
C. Aesthetics of Knowledge
D. Implications of Knowledge
E. Reading and Writing in the Learning Process
F. Critical and Effective Thinking
G. Creativity
H. Pluralism

The position paper sets forth policy and procedure keyed in to the college governance system, as well as a general education philosophy and the criteria themselves. Each criteria is stated, defined, expanded upon in a narrative, and examples given of possible applications. The structure and process for reviewing and recommending course outlines in light of the criteria is delineated.

In early January 1982, after discussion and debate, the position paper with minor amendments was unanimously approved by the college community and recommended as college policy to the President who gave his approval and declared the position paper policy.

An Advisory Committee for the project was established of faculty and administrators from all curricular areas as proposed in the grant application. As it turned out, the functions of the TOP Study Group, a pre-existing committee for Tiers Two and Three called the General Education

Societal Issues Committee, and the General Education Committee established by the Tier One position paper, and the processes of college wide governance, duplicated to a very large extent the functioning of the Advisory Committee. After several meetings, the Advisory Committee went into abeyance, but not before useful contacts had been made with student representatives. The project director and members of the TOP Planning/Writing Committee met with students and conducted several workshops to explain the criteria, the general education program, and to gather inputs.

Another change to the plan outlined in the grant proposal had to do with the use of consultants. As the process of developing criteria unfolded, it became apparent that the expertness of (1) consultants as proposed would be too general, (2) experts prepared to speak on general education, the two year college, and sensitive to Los Medanos College characteristics and the project were very scarce, (3) the "grassroots" approach was paying off in terms of faculty ownership and quality of criteria without outside consultation other than that of the program's general consultant and the outside evaluation. Consequently, consultants were not brought in as proposed.

Nevertheless, the value of expert opinion was clearly recognized. Another means was developed to obtain it. In retrospect, the project should have consulted the NEH on this change, but believed it to be within the scope of change permissible at the local site without prior approval.

To obtain expert opinion on the criteria, the position paper in draft form was sent by mail to seven persons nationally eminent in their knowledge of general education. Several were specialists in the community college. The written critiques by these consultants-by-mail proved to be very informative and helpful, and reassured the project that it was on target, both as to process and the criteria. (See Appendix E for the list of specialists and a copy of the letter sent to each soliciting their response and the text of their critiques.)

Phase II

The main activity of Phase II, Spring 1982, was the revision of course outlines. All faculty members were invited to write new courses or to revise previous general education courses in light of the criteria and present them as candidates for Tier One. Twenty-five course outlines were ultimately developed and introduced into Tier One. (See Appendix F for the list of course authors and courses.)

The work of course restructuring centered in the Areas and Sub-Areas among subject matter colleagues. Area Deans took responsibility for setting up meetings, explicating the criteria, and giving guidance on the preparation of course outlines. For purposes of Tier One courses, a special course outline format and instructions was developed. (See Appendix G for a copy of the Course Outline Format and Instructions.) Workshops were held early in the Spring to explain and illustrate with a sample course the new general education course outline format.

A General Education Committee (GEC) was set up and put into operation as called for in Part II of the Criteria position paper. (See Appendix H for the roster of members for Spring 1982 and Fall 1983.) The GEC met during the semester to discuss its charges and to develop procedures.

Forms to report recommendations and a flow chart were prepared and communicated to course authors. (See Appendix I for the report form and flow chart.)

In early May 1982, the GEC met off campus for a full day and on campus for a half day to review proposed course outlines and make recommendations. Each course was discussed, evidence of satisfaction of criteria sought, conditions for further development noted and recommendations made. Because the Fall 1983 Phase III was to feature test teaching, TOP workshops, and further course refinement, only conditional recommendations were made. Some courses clearly or mostly satisfied the criteria, while others satisfied them only partly. The calendar for final review was set for early Spring 1983. (See Appendix J for the Minutes and Report of the GEC.)

Phase III

A workshop session was held mid-June for course authors to provide ideas and direction for curriculum work during the summer. Here a change was made in the project plan proposed in the grant application. The college president, project director and faculty members concluded that instead of a two week working session proposed for a small group of instructors, it would be more productive to have course authors work on their course outlines, as needed (some were further along than others) individually, under the direct supervision of their Deans. This change should have been cleared with the Grant Office, but at the time it was considered within the scope of change permissible without approval.

Prior to the opening of classes, course authors met in a workshop to begin a close examination of the criteria and to teach one another ways of satisfying them in respect to course content, pedagogy and materials. A calendar of workshops was set out. Notes were taken at the workshops and together with useful materials on topics such as learning styles, approaches to problem solving, were distributed to the general education faculty and the General Education Committee. (See Appendix K for the calendar and a typical set of workshop notes.) Course authors worked with the project director, deans and colleagues and attended workshops.

The General Education Committee met in late Fall 1982 to plan for the final round of review and recommendation. The procedure was essentially the same as that of the previous round in Spring 1982. A one month extension of the grant period was applied for and received. During Phase III, dissemination activities took place. A presentation of the Tier One criteria and the overall model was made at the Fall convention of the California Association of Community Colleges. Numerous inquiries were responded to. President Carhart initiated dialogue with local high schools and hosted several meetings with principals and others to discuss the general education program and solicit feedback. He also hosted a meeting of the Regional Association of East Bay Colleges and Universities (RAEBCU), the day long agenda of which was Los Medanos College's general education program and the criteria. (See Appendix L for membership of RAEBCU.)

The program of evaluation moved into its final summative phases in late Fall 1982. Evaluation was intended to be on-going, formative, continuous, and on-site. (See Appendix M for summary of evaluation plan.) When one of the original external evaluators, John H. Porterfield, passed away to the great loss of the college and the project, Charles C. Collins, Dean of Humanistic Studies Emeritus and general consultant, stepped in to assist Karl O. Drexel in the evaluation process. Though lengthy, their extensive and insightful report is included in the body of this report (Part IV, below). The unavoidable redundancies of this narrative portion of the final report and the evaluation report and length of the overall report are justified, it is hoped, by the detailed and careful analysis of the project and recommendation and responses to questions raised by NEH in Fall 1982.

As a part of the evaluation project, a pre- and post-survey of student awareness of the criteria was administered in Phase III. The data was scored and interpreted by Dr. Richard E. Peterson, Senior Research Psychologist at Education Testing Service. (See Appendix N for his report.) Added to the evaluation plan was an on-site evaluation by an expert on community college humanities. Dr. Nancy Hoy of Saddleback College was engaged to visit the college twice and examine the curriculum for humanities elements, a topic of interest raised in particular by Dr. Susan R. Parr upon review of the interim performance report submitted in June 1982. The essence of Dr. Hoy's report, as well as Dr. Peterson's interpretation of the survey data, are incorporated in the evaluation chapter to follow. (See Appendix O for the full text of Dr. Hoy's report.)

During the last month of the project, course outlines were completed and distributed to the General Education Committee for study. Preparations were made for the final review and recommendation of courses during several meetings of the committee.

The General Education Committee, the college wide body set up to judge course outlines against the general education criteria (see Appendix H), met on February 16, 1983 and March 1, 1983, off campus for all day sessions to review and recommend on proposed course outlines, and met last on March 15, 1983 on campus to complete the process and attend to details. (See Appendix P for minutes.)

Post Project

Activities continued after the end of the funding period. Course authors worked further on courses to make what changes might have been recommended. Preparation of the final performance and financial reports was undertaken. Discussions were held with the program evaluators on the next activities to be planned. These included dissemination of the model and a long range evaluative study of the general education program as a whole with special attention to learner outcomes and to a continuing critique of the criteria.

IV. EVALUATION REPORT*

The aims of this project were three: (1) to arrive at consensus on criteria for defining whether a course is indeed general education; (2) to restructure aspirant general education courses to meet these criteria; and (3) to test these restructured courses in the classroom and refine them accordingly. It became the task of the evaluators to see if these three aims were met. They were. But needless to say, the above statement is just the bare bones of the whole enterprise and the evaluation thereof, hence much more needs to be said.

Were the criteria and the restructured courses congruent with the five postulates assumed to be self-evident truths about general education? (Appendix B.) Did the humanistic spirit become more pervasive throughout the entire general education program at Los Medanos College? Through staff development was there a restructuring of course outlines and course syllabi that addressed the agreed-upon criteria and demonstrated their teachability? Did this project complete an integrated model of general education that could serve to stimulate and encourage other colleges struggling with this curricular and pedagogical problem? Each of these questions reflect an objective of this project and, to the degree possible, will be answered in this evaluation.

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*The content and the writing of this chapter on evaluation was the responsibility of the project evaluators, Charles C. Collins and Karl O. Drexel.

The above qualifying phrase, "to the degree possible," is a necessary caveat since it would be premature to try to give categorical answers to these questions. It was pointed out in the "Evaluation Plan for the Tier One Project" (Appendix M) that product evaluation cannot be made after only one semester of trial and refinement of the restructured general education courses. To quote: "Product evaluation (defined here as meaning (1) whether the students learned the criteria based content, (2) whether the courses contributed to a more integrated understanding, and (3) whether the courses had impact on the students' values) will involve a two to four year longitudinal study which should not begin until Fall, 1983. This will allow for two full semesters of in-house criticism, correction and refinement of these criteria-based general education courses." This qualifier now becomes the primary recommendation growing out of this evaluation: general education criteria have been hammered out and have been incorporated into the courses but it will take a different kind of long-term evaluation to demonstrate that the program has a significant impact on student knowledge, understanding, values and world-view.

It should also be pointed out that the evaluation was formative, was pro-active, was concerned with process, called for self-evaluation, involved consultant evaluators. All of this was by design and was included in the pre-project plan for evaluation. Hence, little, if any, of this evaluation report will be new to the faculty and administrative participants in this project. The feedback was immediate and continuous.

The project was divided into three distinct phases with approximately a semester given to each: Phase One, arriving at consensus on criteria; Phase Two, restructuring of course outlines to meet the criteria; and Phase Three, testing in the classroom and then refining the restructured courses. This report will begin with a cataloging and an assessment of the process that went on in each of these three phases. This will be followed by an evaluation by the faculty participants of the soundness and teachability of the criteria. Next will come a summary of the pre and post testing of students on their awareness of the criteria. Also to be summarized will be the findings of an on-site evaluation of a humanities evaluator and consultant. Finally, the conclusions and recommendations that flow from this evaluation will be made.

The Process and Its Assessment

From the Pre-Project Phase through Phase III, the evaluators have been monitoring and assessing the process and progress of the Tier One Project (TOP). This formative type of evaluation began by attending the college-wide meeting when the National Endowment for the Humanities (NEH) approval of the grant was announced. In addition to countless meetings, formal and informal, with the president, with the TOP director, and with the deans, the evaluators, one or both, attended every retreat, nearly every workshop, most General Education Committee meetings, and every TOP Study Group seminar. During these many sessions, their opinions and advice were sought and their participation and feedback were frequently substantive—and always graciously received.

What will follow is a sequential report on process with some judgmental assessment. It is designed to answer the question, "Did LMC actually do that which it promised to do?" and "How well was this process carried out?"

Pre-Project, Spring 1981

In early spring, the college announced that their grant application to N.E.H. was approved. The project, entitled "An Implementation Project to Complete the Integration of an Interdisciplinary General Education Model Predicated on Certain Humanistic Assumptions" was launched by the president with a college-wide meeting. This meeting of students, faculty and administrators, supported by the background paper, "Plans for Continued Revision of the LMC General Education Program," was used primarily to discuss the implementation of the project and secondarily to explore its significance to students who plan to transfer to the California State University and College System (CSU). Coincidentally, the CSU had just adopted new general education requirements for all graduates which gave an urgency to early completion of the LMC general education model.

As an outcome of this LMC meeting, the general education courses were organized to fall into these six families of disciplines: social sciences, behavioral sciences, biological sciences, physical sciences, humanistic studies and language arts. Another outcome was the selection of a Tier One Project Study Group (T.O.P.S.G.). This committee met several times to plan the specifics of what must be done to meet the objectives of the grant.

In April, the TOPSG background paper, "Plans for the Revision of the Tier One Course of the LMC General Education Model," was distributed to all faculty, full and part time, as well as administrators and student representatives. This was accompanied by a memo from the president announcing his intentions to devote the day long end-of-semester retreat to a full exploration with the faculty of the plans for, and the organization of, the project. The evaluators, who were in attendance at this retreat, recorded the judgment that the faculty understood the fundamentals of the project and gave it their whole-hearted support.

Phase I, Fall 1981

Before the fall semester began, the TOP Study Group met in an all day retreat. The purposes of this retreat were (1) to review LMC's curricular approach through a study of its total general education model and assumptions, (2) to discuss where and how Tier One fits into the model and to talk about anticipated problems and the process for carrying out the project, and (3) to address itself to the question, "What ought learners be expected to learn in Tier One?" Through brainstorming, ideas on criteria were generated, analyzed and finally synthesized to the degree that the group began to see glimmerings of criteria that might be common to all Tier One courses.

Following this retreat, the TOP Study Group met several times to review the work done at the retreat. It formed sub groups to focus on criteria items generated, began to define criteria, and made plans for another retreat.

Subsequently, the third retreat was held to consolidate and refine the list of proposed criteria and to further define each criteria left on the list. Beginning with 24 criteria, the study group condensed the number to 11. The group then divided itself into smaller groups to hammer away at further consolidation and refinement of criteria.

During the Fall, the TOP Study Group met six times to develop a position paper that would spell out the criteria and a procedure for their application. By late fall, the group had adopted a draft position paper. By this time the seemingly irreducible eleven criteria had been reduced to eight.

Immediately after the Study Group endorsed the position paper on the eight criteria, the project director, upon the advice of the project evaluators, sent it to seven consultants with expertise in general education (see Appendix E for names and affiliation), with the request that they "assist us in the development of criteria for Tier One of our General Education Model." These consultants were asked to give the college written critiques that would address the following questions:

> "Will the proposed criteria indeed function as criteria, i.e. will they discriminate general education from non-general education?"
>
> "Are the criteria comprehensive?"
>
> "Do they seem to be consistent with general education as you know it?"
>
> "Are they central in significance to what general education should be?"
>
> "Do they seem workable?"

The responses from these consultants were gratifying. They not only gave the college excellent advice but they were extravagant in their praise for the efforts and progress being made in general education at LMC (see Appendix E for the full texts of their appraisals). This manner of using consultants had never been previously tried by LMC. It proved once again that written statements are more thoughtful and coherent, and less evanescent, than oral ones. Needless to say, it was incomparably cheaper than bringing these consultants to LMC for a visit. These men and women learned the LMC context from reading the background materials sent to them, hence their comments were on target. Later experience demonstrated their frequent prescience.

After further discussion by the Study Group, the position paper, titled "Tier One Criteria and Procedure for Application" was sent to the various subject matter areas for broader faculty review and discussion, in accordance with college governance procedures (see Appendix D). These area meetings were followed by a college-wide faculty/student meeting where both the criteria and procedures for application for course approval were debated and finally endorsed. The vote was unanimous.

Phase II, Spring 1982

The first meeting of the second TOP phase involved the director, the president, and the four deans. The purposes of the meeting were to develop agreement on procedures, responsibilities and the possible further use of consultants. This important meeting set the stage for the intense work that was to go into the restructuring of discipline courses to meet the criteria. The deans were to take the leadership with their respective faculties in this effort. The director was to be engaged in area meetings, with groups of faculty from particular disciplines and with individual faculty—all on an as needed basis. The deans, however, were expected to be the major force in giving direction, encouragement and assistance to the faculty as they revised their course outlines preparatory to submission to the General Education Committee* for review and approval—or disapproval.

Soon after the dean's meeting, the TOP director assembled the General Education Committee. The purposes of this meeting and subsequent meetings were to review the entire process of approval/ disapproval, to develop a deep understanding of the course outline format, to review the constraints under which they would operate, to talk about the responsibilities of the deans and president, and the time-line that would, to some degree, dictate their action.

During the early spring this General Education Committee was divided into small teams to review specific course outlines. Each team included the dean and a faculty member from the same area as the course, and, to assure objectivity and balance, a dean and a faculty member from outside of that area. The responsibilities of these review teams were to (1) compare the restructured course outlines in the light of Tier One criteria, (2) to make contact with the course author, as needed, to clarify questions and work toward the solutions of problems, and (3) to lead the discussion on a proposed course at the meetings of the full General Education Committee where final recommendations of approval or disapproval was to be made to the president.

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*This committee should not be confused with the Tier One Project Study Group (TOPSG). Its membership involved administrators and non-general education teachers as well as participants in this project. Its function was (and is) to study, discuss and rate the re-structured course outlines, vis-a-vis the agreed upon criteria.

In late spring, at a two day retreat, the GEC met and reviewed, graded course outlines on a three level scale, and made comments and recommendations on all course outlines that had been submitted. Authors were not present at these meetings. Since this was the first, not the final, attempt to revise courses in the light of new criteria, the most significant aspect of this process was the comments and recommendations for improvement. The dialogue that preceded committee action, and particularly the dialogue which followed with the deans and with the review teams were responsible for getting many of the course authors on the "G.E. track." No course was given an unqualified and permanent approval and most authors were asked to do substantial revision. When judged as first effort, this entire review and approval process was tough-minded but fair and, generally speaking, was accepted by the participating faculty with good grace. To be specific, only six courses received general endorsement with minor qualifications and suggestions, five courses were rated as essentially sound but in need of considerable revision and the remaining twelve courses were reported as needing substantive rethinking and restructuring. (See Appendix J.) Most of the faculty understood that this was only preliminary judgment and that revision was expected throughout the fall semester testing in the classroom.

At the next GEC meeting the director discussed the agenda for the summer and outlined the plans for Phase III. During the summer, between Phase II and III, the director conducted two workshops and worked on a one-to-one basis with those faculty members who were continuing to revise their new general education course(s). The first workshop was devoted to the sharing of ideas on "Effective and Critical Thinking and Other

Criteria." The second workshop, a meeting of the full TOP Study Group conducted just before the new semester began, centered on the criteria "Modes of Inquiry" and "Reading and Writing in the Learning Process." In addition, the director gave the group an overview and orientation to Phase III and discussed the plans for project evaluation.

Phase III, Fall 1982

Early in the fall semester the director began the "Fall Tier One Workshop Series." These were held each Tuesday for twelve weeks to give at least two hours coverage to each of the eight criteria. The purposes of these workshops, or seminars, were: (1) to further define and explore ways to handle Tier One criteria; (2) to share teaching experiences and information; (3) to learn from one another and to offer the services of consultants;* (4) provide ideas for refining course outlines; (5) to encourage some coordination and cohesion among Tier One courses, and (6) to engender mutual support.

It was unfortunate (and a great loss to the non-attenders) that these twelve workshops on criteria were not more consistently attended by full and part-time faculty. The science instructors, both in the physical sciences and the biological sciences, were there consistently and from self-report, greatly profitted from their involvement. Unfortunately, a few very creative instructors, who have been enthusiastic supporters of the LMC general education model, had direct time conflicts with classes and had to miss. They, like all others, received copious notes on what had transpired (see Appendix K for calendar and for an example of these workshop reports).

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*From the extensive history of projects at LMC, the lesson is being slowly learned that the faculty has not been impressed with the value of working with outside consultants. They report that the consultants speak from their own experiences which is invariably foreign to the LMC context.

During this period, and indeed since the GEC meetings in late spring when courses were graded on compatability with criteria, faculty were at work on the needed restructuring of course content and pedagogy. These criteria workshops and sub-area meetings with colleagues and deans gave new insights which led to more substantive changes.

In December, after the completion of these twelve workshops, the director frequently met with the individuals and with particular disciplines to review the revised, and sometimes new, course outlines. To accompany this rewriting process, the director scheduled two additional "very practical, shirtsleeves sessions on course rewriting." For the first session, "We will look at the required course outline format and review expectations for courses, look at models for various parts of the course outline such as overview and rationale, criteria and so forth." This they did do. For session number two, "We will focus on problems and solutions." This they also did.

The GEC held a number of meetings during this fall semester primarily to reorganize (some new members were added) and to familiarize themselves with the procedures for continued review and judgment of restructured course outlines. Review team assignments were made and by mid-February 1983, the Committee was prepared to review revised outlines. These courses had been field tested and, presumably, fine-tuned. An off-campus, day-long committee workshop was held on February 16, 1983 to prepare for the review of courses.

The General Education Committee met on February 16, 1983, for a full-day retreat at St. Mary's College to measure the completely revised, restructured and classroom-tested course outlines against the agreed-upon criteria for defining whether or not each course merited the general education label. It was a remarkable experience to be an observer at this process. Eleven of the thirteen GEC members were present and all of them showed by the level of their remarks that they had become truly sophisticated in general education theory and had done their homework in making an assiduous study of each of the 25 courses presented for their recommendation of approval or disapproval. A subsequent, shorter GEC meeting was held on campus to review the remaining course outlines. These were approved, bringing the total of courses in Tier One to 25. (See Appendix J for minutes of GEC meetings.) There was no evidence of softness of judgment or of a cavalier approach to their responsibilities as judges. Their near unanimous vote of approval of all the courses presented at a second, all day meeting on March 1, 1983 reflected how far the general education faculty had advanced in that one semester of restructuring, testing, refining, further testing and then final refining of their general education courses. This is not to say that the process of improvement can now stop but it is to attest that the calibre of the present L.M.C. general education courses is commendably high and much beyond the expectancy of the evaluators when this project began. A representative sample of general education course outlines will be included in the appendices to substantiate the validity of this high praise (see Appendix Q).

Two other items should be noted here. In the grant proposal it was mentioned that efforts would be made to keep the feeder high schools in the L.M.C. area fully informed on this general education model and to articulate the L.M.C. general education courses with those of senior universities and of peer community colleges. Both of these promises were kept largely through the efforts of the L.M.C. president.

President John Carhart established and chaired a liaison committee of high school officials. At periodic breakfast meetings he kept them abreast of the progress being made in completing the total L.M.C. general education model. As an active member of the Board of Directors of the Regional Association of East Bay Colleges and Universities (RAEBCU), President Carhart has kept the membership (see Appendix L for listing of affiliates) apprised of the innovation in general education being attempted at L.M.C. On February 4, 1983, the entire RAEBCU meeting was devoted to discussion of the philosophic bases of this model; to the pedogogical issue of whether all general education courses share common criteria; to the question of whether hewing to the criteria causes a watering-down of content; and to the crucial issue of student capacity, particularly at the community college level, for mastering such difficult learning. The consensus of this group was that the L.M.C. model was an ambitious and difficult program to implement but well worth the struggle. None of the representatives of colleges and universities saw any difficulty with the L.M.C. general education courses transferring and meeting their liberal arts or general education requirements. Several volunteered statements that they wished their own colleges were trying a program as bold and as promising.

Evaluation by the Faculty

By means of an oral but highly structured interview, general education faculty were asked in late Fall of 1982 to evaluate, after a semester of trial, the soundness and teachability of the general education criteria (see Appendix R for the interview protocol). These interviews were about an hour in length and included 19 of the 21 instructors teaching the 25 Tier One general education courses. One instructor left in mid-semester and another was in the process of retiring, and were not interviewed.

The basic findings from these interviews were discussed in a three hour long session with the president of the college, the project director and the four deans. The purposes of the meeting were (1) to provide immediate feedback to stimulate corrective measures (formative evaluation); and (2) to secure further assessment of the validity and teachability of the criteria. Regarding the criteria, the evaluators found the following:

Intradisciplinary. No faculty member rejected this as a valid criterion for general education. Sixteen of the nineteen instructors described how they succeeded in making their courses intradisciplinary. One said he had much more success in General Physical Science than in College Physics but that in theory College Physics also shared common laws, common principles, common generalizations, and common methodology with astronomy, chemistry and other disciplines within the family of physical sciences. The World Literature instructor agreed with his colleagues in Mass Communication that each of these courses is inherently interdisciplinary with several families of disciplines but it requires a bit of stretching to clearly show the intradisciplinary commonality shared by these two courses.*

Mode of Inquiry. All 19 of the instructors interviewed said there was indeed a definable mode of inquiry in their disciplines. The two instructors who voiced some equivocation seemed to be objecting to the question being too black and white. Part of the ambiguity, which came out in the discussions with the president, the project director and the deans, was whether the mode of inquiry is specific to a single discipline or to a family of disciplines.

Seventeen of the instructors gave affirmation that the mode of inquiry could be articulated to the students and that it was spelled out in their restructured course outline. Those few instructors who raised some doubts concerning their students' ability to demonstrate their knowledge of mode of inquiry on tests seemed either to be registering caution (e.g. "Maybe," "I hope so") or were questioning the universal appropriateness of the term "mode of inquiry," e.g. "Is the creative process in the arts a mode of inquiry?"

Implications of Knowledge. The opening question on this criterion read: "Do you think there is a new and broadened emphasis on implications of knowledge in your course?" When probed, those who gave a doubtful or negative answer to this question proved to be saying that it was not new or broadened; that emphasis on the implications of knowledge had always been there. The overwhelming message was that this is a valid criterion, that "I am more aware now," that teaching for implications makes the course more relevant to the students, ("a hundred times more relevant") and that teaching about the ethical implications of knowledge is unanimously endorsed.

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*The reader should remember that at L.M.C. "intradisciplinary" means across disciplines within a family of related disciplines whereas "interdisciplinary" means across disparate families of disciplines.

It is apparent that the pedagogical technique of inquiry into ethical implications, introduced into the Tier II and Tier III courses of the LMC general educational model, is now part of the orthodoxy of this college. As a matter of fact, this part (ethical implications) looms so large that some instructors confuse it with the whole and seem somewhat blinded to the fact that the term "implications of knowledge" also implies effect, application, use, relationship to, significance and other more neutral and less value-laden implications than do ethical ones. Perhaps this response captures what is being said here: "I have to struggle with this criterion. Music doesn't relate much to the ethics of societal issues. However, many other implications flow from the knowledge of music."

Aesthetics of Knowledge. On this criterion, the reaction of the participant faculty became quite mixed. Only five gave an unqualified "Yes" to the question, "Did you find your course lent itself to the teaching of the aesthetics of knowledge?" It appears that the meaning of the term "aesthetics of knowledge" remains fuzzy in the minds of many of the instructors. This is borne out by the fact that those who attended the Fall 1983 workshops had a much clearer concept of aesthetics than those who did not. Of course, instructors in the arts, literature and philosophy had a well defined notion of aesthetics of knowledge, irrespective of workshop attendance.

When asked, "Do you think all general education courses have a teachable element of aesthetics?" only eight instructors agreed that this is a valid criterion for all courses. However, among the others who said "No" or equivocated, five said that it would be the science instructors who would experience difficulty. The science instructors, who as a group, were the most regular workshop attendees, all said that aesthetics of knowledge was easily teachable and that they were doing it. This criterion was also among the most doubtful in the assessment of the criteria by the outside experts on general education (see Appendix E). Even so, these evaluation interviews with faculty clearly suggests that those who know fully what "aesthetics of knowledge" means can and did teach to this criterion. One other difficulty which may have contributed to the confusion and the mixed evaluation of this criterion is captured by this quote: "I have no trouble teaching for it, but I have a hard time testing for it." It may be part of that enriching ephemera of good teaching that is definitely there but too elusive to be measured.

Writing. By self-report, all participant faculty are requiring a great deal of writing in their courses and are holding students to higher standards of writing. Nine of these general education instructors say that they are, in varying degrees, trying to teach writing within their courses.

It is important to note that concurrent with this project there was another project supported by the Fund for the Improvement of Post Secondary Education (FIPSE), which aspired to train peer tutors to help students who are deficient in reading and writing skills. Also, and more important in this context, the FIPSE project was designed to train faculty to direct, use and supervise these tutors. Almost without exception, those instructors who said they were actively teaching writing skills in their classes were "graduates" of the so-called FIPSE seminars. In several cases this was true even when the instructor could not find a peer tutor for the class.

The point of raising this FIPSE variable is that it appeared from faculty comment that it was the whole FIPSE thrust and consciousness-raising, not making writing a general education criterion, that caused the increasing concern over, and involvement with, student writing. Witness this statement by a music instructor: "I've really tried this year to insist upon lots of writing; in-class writing, essay questions on exams, a term research paper, concert reports, etc. I can't do much [in actually teaching writing], but I give them pointers. I help them think through and prepare research papers. It [The FIPSE tutorial system] never really worked out in my class. I have had trouble getting tutors. However, the FIPSE seminars got me to include more writing and this involved me in the process."

Reading. The improvement of reading was clearly the least observed criterion and the one with which the instructors felt the least comfortable. Many said that they had always demanded heavy reading in their general education courses and three said that they had increased the amount of reading. Fifteen of the nineteen reported that they were not seriously trying to teach effective reading techniques. One said, "The FIPSE seminars helped me in using different methods in reading" but most made no mention of FIPSE; they frankly admitted that they were not trying to teach reading techniques and made statements like these: "This is the one big weak spot." "I feel uncomfortable about this." "No. Writing, yes, but not much on reading." "I still need help with this." "I feel least comfortable with the reading and writing criteria."

Effective Thinking. There is unanimity concerning effecting thinking as a valid criterion of general education and on its teachability. Everyone made such positive claims on this criterion that the suspicion arose that effective thinking might be one of those shibboleths in the profession that no self-respecting teacher could deny. However, the responses often spelled out how effective thinking was being taught and, in other ways, showed a high level of sophistication regarding this criterion. This is not surprising in view of the fact that a program of professional staff development at L.M.C. has been going on, in various guises, since the first staff members were engaged in 1973.

Here are some typical faculty statements: "I do a lot of problem solving exercises." "I pose the problem then extract from the students the various options for solution and have them probe into the implications and consequences of each option." "I teach analysis and synthesis and how to pose probing questions. I teach them how to speculate and then analyze their own speculation." "I would hope that the problem solving method would certainly teach effective thinking." "[The students] have learned how to attack a problem. We often take the technique of conceptual blockbusting and other methods of problem solving beyond my course and into other fields, into related areas of concern."

Creativity. No instructor denied this as an appropriate criterion of general education. Thirteen of the instructors said that creativity could be taught, released or elicited and that one way or another they were doing it.

Among those who did not give a categorical yes, there seemed to be some confusion between aesthetics and creativity as distinct criteria. It should be added that the definition of creativity is clearer in their minds than that of aesthetics. Several, particularly in the arts, also said that creativity has considerable overlap with effective thinking. Almost all instructors agreed that the occasions for creativity had to be planned and that this should be evident in the course outline. A few argued for the serendipitous approach of simply calling attention to and exploiting creativity when it chanced along.

Pluralism. The way the question was phrased made the responses revealing: "Pluralism has always been a big thing at L.M.C. Is it a big thing in your course?" All faculty agreed that pluralism is still dealt with in their courses but all members do not agree that it is a "big thing." One instructor suggested that "It has faded;" another said, "It is not a big thing;" another reported, "It is one of the most difficult criteria to include but I am planning to include it."

Historically, pluralism at LMC was defined narrowly to mean racial and sexual tolerance and equity. Most instructors still seemed to see pluralism only in terms of sex and race and, even in these regards, there is a suggestion that it is already so incorporated into the LMC mentality that it is no longer a "big deal" and there is an element to it of beating a dead dog. Actually, it is not so narrowly defined in the criterion statement but not many of the faculty interviewed perceived it as philosophic pluralism, as introducing a lot of different ways of seeing the world, and as generating tolerance and respect for cultural, generational, class, religious and other differences. If the faculty took this broader definition, they would have a much easier time applying the criterion of pluralism to their courses.

The questions in the interviews with the faculty went beyond the eight criteria that have now been covered. It also seemed appropriate to ask for faculty opinion on the soundness of the whole package of criteria, on whether course content got lost in teaching to these criteria, and on their appraisal of the professional gain from participation in this project.

Appropriateness of the Criteria. When asked, in effect "Have we arrived at the right criteria for defining general education?" 15 out of 19 instructors answered yes. But, more than four registered, at least, confusion regarding aesthetics of knowledge; more than four reported having trouble with the teaching of writing; far more than four said that they were not trying seriously to teach reading; and more than four showed that they had a narrowly defined mind set on the criterion of pluralism and a weakening, pro-forma commitment to that. More will be said regarding these contradictions in the section Conclusions and Recommendations.

Loss of Content. Apprehension regarding faculty objection to loss of course content by teaching to these criteria was dispelled by this survey of faculty evaluation. True, seven instructors said some content was omitted but all of these said that they thought the gain outweighed the loss. Most said that content wasn't lost at all but was simply used as grist for the mill in restructuring the courses to meet these criteria. Among the seven who claimed some loss of content (the modal amount was 10%) the message seemed to be that in retrospection they saw themselves jettisoning supercargo that most students would never remember anyway and that, through rethinking the course, they had achieved a more integrated, more streamlined, more teachable, and more learnable course. Since all of these courses are transferable to the universities and most represent first level courses in their respective disciplines, this faculty endorsement is most encouraging to the prospective longevity of this general education model.

Professional Experience. Sixteen of the nineteen instructors responded that restructuring their courses was a profitable professional experience. As one put it, "Boy, was it ever," and many said, "Very much so." One characteristically skeptical instructor said, "Maybe," but then elaborated the "maybe" on the positive side. Two instructors said no that it had not been a positive professional experience for them.

The sub question to this was, "Where should we go from here on it?" There was a pattern to the many responses to this question which can best be captured by these quotes: "We have to keep sharing experiences by seminars or by retreats or by some means: this is too valuable to lose." "We have a unique thing going and we have to resist any attack on it." "It succeeded largely because we are young, energetic and flexible, but we must find a way of sustaining this even as the faculty ages—which it will." "Part time faculty should be given proper preparation or should not be allowed to teach these general education courses."

Evaluation by the Students

Note that this section is called "Evaluation by the Students," not "Evaluation of the Students." The latter process must be delayed until the faculty have made final pedogogical refinements to their newly approved general education course outlines and until a longitudinal, controlled testing design has been developed. Work on this is in progress and consultations with testing specialists have been made. Present expectancy calls for experimental vs. control groups to be set up and the pre-testing phase to begin in the opening weeks of the fall semester, 1983. For the purpose of this present project, evaluation by the students was limited to a measurement of their awareness that the general education courses they were taking were being taught to achieve certain criteria.

The method of making the measurement was simple and straightforward in design but had its limitations in execution. A series of questions were framed around each of the eight criteria to elicit evidence of student awareness that the content of the course reflected these eight criteria. (The questionnaire can be seen in Appendix N.) The limitations were these: (1) Some instructors, for one reason or another, did not give the pre-test early enough in the course;* (2) Some students objected to the length of the instrument and even refused to answer all of the questions; (3) The vocabulary and phraseology of some questions deserved the criticism they evoked; (4) The N. dropped dangerously from pre- to post-testing sessions; and (5) The attitudes of the instructors, in a few cases, moved from negative to positive between pre- and post-testing, hence their students may have registered a greater gain of awareness than the students whose instructors were positive toward the testing from the start.

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*This tended to give a spuriously small spread of "awareness" between the pre- and post-testing since the time interval was a short one. This made it appear that the gain in awareness was small whereas if the pre-test had been given earlier the gain in awareness would have measured much greater.

These limitations only gradually became apparent and in the case of one or two only in retrospect. Even now, however, in the judgment of the evaluators, the study was worth the doing. The results, in general, show a gain in student awareness of the criteria. To carry out the study, Richard E. Peterson, Ph.D., Research Psychologist of the Educational Testing Service, was engaged. He made an impeccable, and exhaustive, statistical analysis of the data that was provided. The text of his conclusions and the tables upon which they are based are available in the appendices (see Appendix N). A very abbreviated summary of his findings plus one summary table will follow.

Peterson's overall conclusion reads, "If one looks generally at the figures in the summary table, it is clear that the overwhelming majority are positive—indicative of increased understanding, awareness or skill across the eight general education criteria, according to the students' own self-report." By his measurement system the average gain in awareness in the eight criteria from pre- to post-testing was .60. As could be expected, this varied by criteria and varied among the six subject areas. For example, on the criterion of "intradisciplinary," the overall average was .51 but this figure was .75 for the Humanistic Studies Area as opposed to .28 for the Physical Science Area. The top figure in the last column of Table 1 gives the average gain for all Areas on each of the eight criteria. This is followed by average gain derived from the subsidiary questions asked on each of the eight criteria.

As can be seen by even a cursory look at Table 1, there was marked gain on the scale for the criterion of "aesthetic" and an extraordinary gain

Table 1.

AVERAGE OF MEAN CHANGES ACROSS COURSES

	BEH	SOC	PHY	BIO	LA	HUM	ALL
	SCI	SCI	SCI	SCI		STU	LS
	L=2	L=2	L=3	L=4	L=1	L=2	L=14
	S=5	S=3	S=8	S=3	S=3	S=2	S=19
1. INTRADISC	.60	.61	.28	.35	.67	.75	.51
1.1	.49	.16	.02	-.06	.81	.17	.16
1.2	-.12	.05	.18	.46	-.02	.23	.19
2. MODES/INQ	.70	.75	.44	.46	1.10	.46	.63
2.1	.20	-.47	.08	.16	.35	-.38	-.01
2.2	.34	.14	-.11	.34	-.25	-.31	.08
3. IMP/KNOW	.74	.66	.39	.62	.80	.56	.62
3.1	.12	.39	-.28	.23	-.46	.52	.12
3.2	.15	.80	.53	-.38	.30	.52	.24
4. AESTH/KNOW	.90	.75	.40	.83	.76	1.10	.78
4.1	-.38	.12	.35	-.04	.75	.18	.10
4.2	0.00	.32	-.16	.20	0.00	-.35	.02
5. WRITING IN LP	.56	.49	.37	.48	.60	.55	.50
5.1	.67	.05	.26	.21	.78	.07	.28
6. READING IN LP	.55	.24	.21	.32	.56	.28	.36
6.1	1.76	.13	-.17	.23	.03	.15	.32
7. EFF THINKING	.38	.55	.33	.39	.50	.54	.43
7.1	-.11	.28	-.06	.02	.63	.42	.12
7.2	.31	.15	.16	.18	.25	-.26	.13
8. CREATIVITY	.77	.78	.37	.45	.50	.59	.58
8.1	-.59	.29	.16	.07	1.19	-.33	.05
8.2	.44	-.24	.07	-.15	-.12	-.01	-.01
9. PLURALISM	1.06	.85	.52	.92	1.69*	.93	.96*
9.1	.42	.04	.16	.34	1.33	.27	.33
9.2	.65	.75	-.16	.06	1.00	.19	.28
MEAN (1-9)	.70	.63	.37	.54	.80*	.64	.60*

*These figures are spuriously high for reasons explained in the text. Readers may substitute .91 and .87 and, in the bottom line, .71 and .59

for the criteria of "pluralism." On the other hand, the gain in the awareness of the criteria of reading and **effective thinking was** below average and the variability by subject Area on these two criteria was quite flat. On the other criteria (intradisciplinary, modes of inquiry, implications of knowledge, writing and creativity) the overall averages in gain ranged from the low .50's to the low .60's. The conclusion of this study seems to be that students did indeed gain in awareness of the criteria as they experienced and learned the content of these general education courses.

Evaluation by External Expert

Nancy Jo Hoy, Ph.D., Humanities Division Chair at Saddleback Community College and National Endowment of the Humanities Consultant, was engaged to visit the project and assess the humanities components of the criteria and the Tier One courses. She visited first in mid-November for a day to become oriented to the college and the project, and later for two days in early January, for an in-depth inspection. The text of her report is available in Appendix O. Clearly, she found the humanities components entirely satisfactory and the faculty highly effective in teaching to the criteria. Highlights of her well written, succinct and insightful report follow.

A goal of Dr. Hoy's visits was to see if the criteria and structure of Tier One put Los Medanos College "...in the right direction in terms of threading humanities concerns throughout the entire curriculum." Her assessment was, yes, though difficult to realize, the criteria and structure put the college on the right track. "The Los Medanos General Education Program is highly ambitious in its intent to integrate what are clearly humanities skills and processes across the entire general education curriculum." She found the president, administration and faculty committed to the task. Classroom visits and interviews inclined her to report effectiveness and success by an excellent faculty in pursuing the criteria. One paragraph will convey her sentiments:

> In each class I attended there was considerable discussion on the implications of knowledge and discovery and the nature of the scientific method or artistic process, all done with considerable grace and ease. Los Medanos faculty rate high for their skills in effective thinking, in the encouragement of ethical inquiry and creativity and for their tolerance of students and encouragement of creative responses (as well as their aforementioned commitment to pluralism). In all classes I found that faculty were highly adept at encouraging students to be participants, not observers. I came away feeling that students appreciated the learning process and were at ease with the Socratic method.

Dr. Hoy continues in her report to pinpoint several issues such as the problem of maintaining proper proportions between course content and the criteria, proportions among the criteria, and evaluation of the criteria. She suggests ways to reinforce and reward faculty and suggests further evaluation.

Conclusions and Recommendations

It is the conclusion of the evaluators that the three basic aims of this project were indeed met: The staff did arrive at consensus on criteria for defining general education courses; they did restructure those courses labelled as general education to conform with these criteria; and they did test these reconstituted courses in the classroom and refined them further on the basis of experience. Further, it is the opinion of the evaluators that in the process of achieving these aims, the staff at Los Medanos

College has made a significant contribution to the theory and practice of general education at the community college level—perhaps at all levels of higher education.

This project was concerned only with Tier I of the L.M.C. general education model. Although it seems strange, it made sense in the local context to complete the upper stories of the G.E. model, Tiers II and III, before going back to rebuild the bottom floor in a more solid way. Now this model of general education is integrated and complete. To be sure, like any structure more work will always be needed and some suggestions for direction of continued work will be recommended. Even so, every L.M.C. student who now graduates and/or transfers to a senior institution will have been exposed to an intradisciplinary, humanistic course in each of five areas of knowledge (Tier I), plus an interdisciplinary, ethical inquiry (Humanistic Studies 2LS) into five current societal issues (Tier II), followed by another interdisciplinary, in-depth ethical inquiry (Humanistic Studies, et.al., 3LS) into a single societal issue selected from a range of issues by the student.

This model has no resemblance to the usual cafeteria-style general education requirements found in most community colleges and senior colleges. It has a tightly reasoned philosophic base to which the staff subscribes. It is highly structured, even prescriptive, and there is a built-in mechanism of staff monitoring which should help counter the inevitable centrifugal forces present in any human enterprise. It has demanding standards both for the instructor and for the students. It is the core of the L.M.C. curriculum and its impact is already ramifying out to almost all other courses being taught. It aspires to widen the cadre of instructors who teach in this general education model both to a broader pool of talent and also to generate identification with the model by the entire faculty.

The evaluators have arrived at some conclusions that should be read with care by any college staff interested in adopting and adapting this L.M.C. model.

1. It is a well thought out, fascinating, most promising model but it has not yet had product evaluation so the most crucial evidence is still missing.
2. No college should undertake such a demanding reconstitution of its curriculum unless the college president has the philosophic conviction, the personal will and the clout to give it the absolutely required leadership at the presidential level.
3. The sine quo non of fundamental—and lasting—curricular change is professional staff development. L.M.C. was blessed with a very talented professional development facilitator and his importance can hardly be overstated. Change in what is taught does not occur in the classroom until change first occurs in the minds of the instructors. This can "just happen" in an individual case but it does not "just happen" at an institutional level; it requires a facilitator well prepared in educational philosophy, in curriculum and in pedagogy.
5. The front line troops who win or lose the battle are, of course, the instructors. Unless they are truly professionals with high energy, flexibility of mind, a willingness to learn from each other, and high morale, the ingredients of victory are not there.

World weary and contentious faculties only complain about the status quo, they do not change it.

6. If a complex, demanding general education curriculum like this model can work at L.M.C., it could be made to work anywhere. Of course the above pre-conditions for success have to prevail but what is meant by this conclusion is that the students who take this program are, to emphasize by use of the idiom, salt of the earth but also run of the mill. If they can be motivated to learn the high quality content of these general education courses, then any college students can be reasonably expected to do likewise.

The evaluators have had the privilege of watching the development of this general education model since its inception. This report reflects their enthusiasm, sometimes awe, for what has been accomplished. Their long time, intimate knowledge of the model qualifies them to make some recommendations, as follow:

- Product evaluation has to come next and it must be designed by a research specialist and be longitudinal in duration. Skeptics can legitimately ask, "Where is the proof of its worth?" until this kind of study is done.
- Some means of continuing professional staff development must be found. As one instructor put it: "We have to keep sharing experiences by seminars or by retreats or by some means: this is too valuable to lose."
- The existing but vague plans for General Education Committee monitoring of present and future course outlines should be spelled out more clearly and made a part of faculty expectancy. The GEC can not be faulted on its thorough and fair judgment of the present Tier I course. The same can be said for the process of approving the Tier II course content. However, past approval/disapproval procedure for Tier III courses did not have the searching inquiry or the rigor of judgment that characterized the GEC process this spring vis-a-vis the revised Tier I course outlines. Future Tier I

course outlines that are proposed should be subjected to equally stern scrutiny, and all present and future Tier III courses should be re-evaluated by this new and higher standard.

- There is nothing sacred about the general education criteria now enjoying consensus. As noted, much confusion on the criterion of aesthetics now exists. The mind-set on the criterion of pluralism is too narrow in the thinking of some of the instructors. The evaluators, and some faculty members, think that reading and writing competency should be seen as pre-requisites, not as criteria of general education. All of which adds up to the point that there should be commitment within a framework of tentativeness; i.e. everyone should act with full commitment to the criteria agreed upon but there should be periodic challenge to and reassessment of the criteria.

V. IMPACT OF THE PROJECT AND ITS STATUS

The impact of the project has been widespread and will be long lived. The project enabled the college to complete its general education model. In the process, numerous faculty and administrators were involved in an extensive dialogue on general education and humanistic concerns. From the initial work of the TOP Study Group to the final stages of test teaching and refining courses, the entire available general education faculty was involved, including many part time instructors. Additionally, non-general education faculty were involved, four directly and immediately as members of the General Education Committee. Other vocational faculty were involved, for instance, as members of the college governance system. Four Deans and the President have been heavily involved throughout the project and will continue to be. This is a great impact because it means that the involved faculty and administration know the criteria and the model and were the actual creators of the program context in which they teach. This is in no way a "paper change" effected top down by a rewrite of college philosophy and catalog course descriptions.

Tier I has been completed, and with its completion, the general education program has been completed. The course outlines are well written and collectively institute an impressive curriculum. A companion volume to this report contains the course outlines for Tiers I, II, and III.

The Tier I Project has been a success, exceeding in the judgment of the college president the most optimistic expectations, a judgment supported by the external evaluators. A very large proportion of the college community was involved, at some degree and in some activities, during the project, and at less cost than estimated in the grant application. A surplus of unexpended funds for faculty support will be returned to the National Endowment for the Humanities. The estimate in the grant application of the amount to be needed for faculty support was based on assumptions of faculty size which turned out to be too great.

The impact is great in another respect. All students who seek the Associate degree or seek to meet transfer requirements for general education will benefit from an integrated, coherent program of general education, at the heart of which are the criteria. There are 25 course outlines for Tier One. In Fall 1983, some 50 sections of Tier One courses will be taught. Assuming a conservative estimate of 35 per section, the impact of the project will be registered on 1,650 students, which considering a college enrollment that should be about 5,000, is a considerable impact.

The status of the project is that of a permanent incorporation into the college curriculum. The Tier One curriculum has been institutionalized as an integral component in the general education program and the educational plan of the college. The product of the project has moved through the governance process and is built into the catalog, the philosophy, the policy and procedures, and best of all, into the heart of the college, that is in the classroom where teaching and learning take place.

The support of the National Endowment for the Humanities has, of course, made all this possible. This support has made possible the creation of an exemplary community college general education curriculum, enriched the professional development of numerous faculty members and administrators, and perhaps most important, ensured that many, many learners for years to come, will benefit from challenging learning experiences suffused with humanities perspectives.

APPENDIX AA

NATIONAL ENDOWMENT FOR HUMANITIES

Faculty involved in the Tier I Project during
grant period July 1, 1981 - Feb. 28, 1983

INSTRUCTOR	STATUS	AREA
Boucher	FT	Behavioral Science
Curran	PT	Behavioral Science
Davi	FT	Behavioral Science
Kishi	FT	Behavioral Science
Marino	FT	Behavioral Science
Sample	FT	Behavioral Science
Scott	FT	Behavioral Science
Strain	FT	Behavioral Science
Thomas	PT	Behavioral Science
Zavala	FT	Behavioral Science
Zipkin	PT	Behavioral Science
Brown	PT	Biological Science
Crouch	FT	Biological Science
Davis	FT	Biological Science
Meek	FT	Biological Science
Yeoman	FT	Biological Science
Duggan	FT	Business
Albert	PT	Language Arts
Arenivar	FT	Language Arts
Bank	FT	Language Arts
Caalaman	PT	Language Arts
Cameron	FT	Language Arts
Collins	PT	Language Arts
Corioso	FT	Language Arts
Ford	PT	Language Arts
Fritts	PT	Language Arts
Gonzales	FT	Language Arts
Hansen	FT	Language Arts
Howard	FT	Language Arts
Jacobs	FT	Language Arts
Lawson	PT	Language Arts
Livingston	FT	Language Arts
Mac Donald	FT	Language Arts
Mc Entyre	FT	Language Arts
Mc Kean	PT	Language Arts
Mendez	PT	Language Arts
Missimer	FT	Language Arts
Nelson	PT	Language Arts

National Endowment for Humanities
List of Instructors
Page 2

INSTRUCTOR	STATUS	AREA
Nikhazy	FT	Language Arts
Peterson	FT	Language Arts
Rodriguez C	FT	Language Arts
Shrader	FT	Language Arts
Smith	FT	Language Arts
Trejo-Meji	PT	Language Arts
Vega	PT	Language Arts
Webb	PT	Language Arts
Cullimore	PT	Math
Custer	PT	Math
Gishe	PT	Math
Henry	FT	Math
Rodriguez G	FT	Math
Greene	PT	Music
Gallup	FT	Nursing
Murray	FT	Nursing
Brooks	FT	Physical Science
Callan	PT	Physical Science
Debban	PT	Physical Science
Juarez	FT	Physical Science
Miller, E	PT	Physical Science
Miller, M	PT	Physical Science
Nakaji	FT	Physical Science
Natson	PT	Physical Science
Ochoa	FT	Physical Science
Rocks	FT	Physical Science
Schweicher	FT	Physical Science
Ball	PT	Social Science
Case	FT	Social Science
Collier	PT	Social Science
Connolly	PT	Social Science
Contino	PT	Social Science
Cooperman	PT	Social Science
Crawford	PT	Social Science
De Maggio	PT	Social Science
Jimison	PT	Social Science
Marshall	FT	Social Science
Miller, L	PT	Social Science
Ontiveras	FT	Social Science
Preston	FT	Social Science
Rasmus	PT	Social Science
Royster	PT	Social Science

APPENDIX A

LOS MEDANOS COLLEGE GENERAL EDUCATION PLAN

TIERS I, II, AND III

GENERAL EDUCATION TRANSFER COURSES Tiers I, II, and III 26-30 Units

TIER I

Tier I requires that students attain 20-24 units by completing a minimum of 1 course in each of the following areas:

Behavioral Science	Social Science	Biological Science	Physical Science	Language Arts	Humanistic Studies
Anthropology	Economics	Biology and Health	General Physical Science	Mass Communication	Visual Arts
Psychology	Geography	Biology	Physics	Nature of Literature	Music
Sociology	History	Ecology	Chemistry	*	Philosophy
*	*	*	Astronomy	*	*

In addition to their academic content, these courses must meet the following criteria as part of their inclusion in the General Education Breath Requirement:

Interdisciplinary • Modes of Inquiry • Aesthetics of Knowledge • Implications of Knowledge • Reading and Writing Assessment
Effective Thinking • Creativity • Pluralism

TIER II

Tier II requires that students complete **Humanistic Studies 2LS: An Ethical Inquiry into Societal Issues,** an interdisciplinary course of 3 units in which ethical inquiry is the mode of instruction. A minimum of 5 societal issues are explored, and a study project is required. For more detail, see the panel to the right.

TIER III

Tier III requires that students complete a 3LS course in one of the 6 areas listed above. These 3-unit courses are interdisciplinary in nature, designed as in-depth critical inquires into one selected issue. For more detail, see the panel to the right.

BASIC SKILLS and PROFICIENCIES 5-12 Units

REQUIREMENTS

Language Arts 10S: College Composition	3 Units
Language Arts 20S: Critical Reading and Composition	Proficiency Test or 3 Units
Mathematics 10: Applied Mathematics	Proficiency Test or 3 Units
Computer Literacy	Proficiency Test or 2 Units
Physical Education: Activity Courses	2 Units

MAJOR and ELECTIVE COURSES 18 Units

REQUIREMENTS

Majors: A student needs to complete a minimum of 18 units in a major with a minimum 'C' average in one of our vocational or transfer programs.

Electives: Elective courses can be used towards meeting the requirements of 60 units for graduation, once the General Education requirements, the Skill and Proficiency requirements and Major requirements have been completed.

THE 3 TIERS

TIER I: The Breadth of Knowledge

All courses in this area have an "L" after the course number designation in the LMC Catalog and Schedule of Classes, indicating that the nine general education criteria listed under Tier I on the chart have been incorporated within the course. Detailed course outlines for each of these courses are on file in the President's Office. These courses lay the foundation that students will need to master in order to take the "capstone" courses offered in Tiers II and III.

TIER II: Humanistic Studies 2LS: An Ethical Inquiry into Societal Issues

This is the one course that must be completed by all students who plan to graduate and/or transfer. An interdisciplinary approach is used to investigate five major societal issues, such as "Energy and Ecology," "The Limits of Growth," "The Population Explosion," "Nuclear War and Other Nuclear Threats" and "Equality and Justice by Sex and Race." These issues may vary from year to year depending on current relevance.

In each case, students learn the dimensions of the severity of the problem, consider the options for dealing with it, explore the potential consequences of each option and inquire into the ethics involved in the choice of action.

To help students "learn how to learn," there is a self-directed study (SDS) component built into the course. Each student is obliged to select a topic of personal interest directly relative to one of the units being examined, set study goals, design and follow a plan of investigation, analyze the ethical issues involved, and finally, prepare a written report of their individual study.

TIER III: The 3LS Courses An Ethical Inquiry Into a Societal Issue

This second "capstone" course offers students the option of concentrating their study on one of several societal issues offered in each of the six curricular areas. Among these are Language Arts 3LS: "Freedom and Responsibility of the Mass Media," Physical Science 3LS: "Fossil to Fission: The Energy Story," Social Science 3LS: "Change, A Look to the Future," Biological Science 3LS: "Death and Dying," and Humanistic Studies 3LS: "The Threat of Nuclear War."

These courses are interdisciplinary and take students through the content by a method of ethical inquiry that encourages them to look at the ethics as well as the available facts of the issues being studied.

This course, like Humanistic Studies 2LS, teaches the skills of self-directed study (SDS). These skills, while helping them learn about the issue they have selected, will help them throughout their lives in investigating the complex moral, economic and social issues they will face in tomorrow's world.

APPENDIX B

General Education Assumptions

A valid conception of "general education" stipulates at least five assumptions:

a) All knowledge is interrelated, and this interrelationship must be prominently recognized in instruction.

b) Knowledge should lead to action; the most significant focus of this action is the resolution of critical problems facing mankind.

c) A guiding criterion in this attack on human problems should be the ethical implications of various options for action. This has been called "ethical inquiry."

d) The parochialism that characterizes ignorance must be countered by the development of a world view that recognizes and accords with the significance of cultural pluralism.

e) Accomplishment of the above ends requires that students develop the disposition, self-confidence and critical skills to be independent thinkers. To do so requires guided experience in self-directed study.

APPENDIX C

ROSTER OF TIER ONE PROJECT STUDY GROUP

MEMBERS OF TIER ONE PROJECT STUDY GROUP

FACULTY

Olga Arenivar	Speech
Judy Bank	Language Arts, Reading
Bill Crouch	Nursing
Jerry Davis	Biological Sciences
Larry Howard	Art, Sculpture
Dick Livingston	Journalism
Bob Marshall	Social Science, Economics, Geography
Dave Nakaji	Physics, Mathematics
Ricardo Ontiveros	Social Science
Andres Ochoa	Welding
Gil Rodriquez	Mathematics
Alex Sample	Sociology, Counselling
Thelma Scott	Psychology, Counselling
Jean Shrader	Humanities, Music
Stan Smith	Humanities, Music
Eric Yeoman	Anatomy and Physiology
Bob Zavala	Child Development

ADMINISTRATORS

Sandy Booher	Dean, Humanistic Studies and Language Arts
Stan Chin	Dean, Physical and Biological Sciences
Vince Custodio	Dean, Behavioral Sciences and Counselling
Carlton Williams	Dean, Social and Economic Sciences

CHAIRPERSON

Chester Case	Director, General Education Project Social Sciences, History

APPENDIX D

A POSITION PAPER

TIER I CRITERIA AND PROCEDURES FOR APPLICATION

Introduction

The Purpose of This Paper

The specific purpose of this paper is to establish criteria that will be used to determine whether or not a course can be designated as a Tier I, general education course and to establish a structure and procedure for the application of these Tier I criteria.

Recommended Action

The members of the Tier I Project Study Group wish the Los Medanos College clusterpersons to approve and recommend for college policy the Tier I criteria, and procedures and structure for the application of said criteria, as set forth in this paper.

The Problem to Which This Paper is Addressed

Los Medanos College has a strong commitment to general education, and over the years has evolved a distinctive, three tiered model. Yet, the model is not complete. Though Tier II (Humanistic Studies 2TG) and Tier III (3TG series) are in place and operating satisfactorily, Tier I, the basic disciplinary courses need attention. The need for attention has been signalled in Position Paper 77-3, the previous accreditation report, and the conclusions of the 2TG-3TG general education project evaluators.

Needed to complete the development of Tier I courses are criteria to designate what is or what is not a Tier I course. Up to now, there has been no clear, comprehensive statement nor consensus on what constitutes a general education course for Tier I. Also pending since the passage of Position Paper 77-3 is a direction to incorporate into general education disciplinary courses the intradisciplinary and other aspects of the now abolished generic course. Until these matters are addressed and resolved, the model will be incomplete, and no effective and consistent curriculum development and decision making for Tier I courses can take place. The criteria and process proposed in this paper will resolve these matters.

The Development of This Position Paper

In Spring 1980, application was made to the National Endowment for Humanities (NEH) for an implementation grant to follow the previous NEH pilot grant that funded the 2TG-3TG development project. The proposal was accepted and funded for a three semester period. The project has three phases, which can be briefly stated as follows:

Fall 1981 -	Tier I criteria and procedures developed
Spring 1982 -	Application of Tier I criteria; revision and/or development of course outlines
Fall 1982 -	Field test, evaluate and revise Tier I courses

During Phase I, a Tier I Project Study Group was formed. The primary task of the group was to develop criteria that would be compatible and consistent with the existing general education model, that would have a genuine education character, and that would be workable and worthwhile. This was a difficult task. The group met frequently and at length to generate ideas, discuss and debate. Now, after numerous drafts and revisions, the study group has arrived at this present paper, which it recommends to the LMC clusterpersons.

Organization of the Paper

Having introduced the topic and shown the problem to which it is addressed, this paper will be now devoted to the criteria and the procedure for their application. Leading into the presentation of the criteria themselves will be a discussion of the criteria and a preamble written to convey some of the more intangible but necessary aspects and spirit of general education that the criteria would not readily communicate. After the criteria are given, the paper turns to the structure and procedures for applying the criteria.

Tier I Criteria

General Education and Education in General

There are numerous and important attributes inherent in all good education, including general education. These are attributes that set high standards for any course seriously designed and taught. A Tier I course would certainly be expected to embody these attributes, though they are by no means exclusive to general education, and thus not criteria per se.

Some of these attributes should be mentioned. Any course, for instance, ought to be learner-centered. Any course ought to have as overarching intentions the enhancement of the learner's abilities and capabilities and the learner's acquisition of knowledge and skills. Any course ought to offer learners the opportunity to expand their understanding of self and others, and to promote respect for self and others. Any course ought to have a positive effect on a learner's sense of competence and assist in the discovery and unlocking of personal potentials. Any course ought to contribute positvely, directly or indirectly, to the way learners live their lives in work, leisure and recreation, in their self-fulfillment and in service to others and in contributions to society. Any course ought to work for the learner's increasing effectiveness as a communicator by helping them be effective in writing, reading, listening and speaking.

Preamble to Tier I Criteria

This preamble strives to convey the spirit of general education, while the criteria convey something of the letter. If there is a distinctive general education curriculum, there is a distinctive general education pedagogy. This pedagogy contributes much to the unique flavor of general education. It may be expressed in a number of ways, be they fleeting and spontaneous or studied and systematic. It may be expressed in the manner and style of instruction, in the selection and handling of content and materials of the course, in the way of regarding the knowledge of the discipline and its possible significance for the learner and how the learner will use it.

It is an active pedagogy that strives to engage the learner in the applications of knowledge to the problems and issues of the real world, public and personal. It is a pedagogy that seeks to select from the vast realms of knowledge of the discipline those materials that contribute in an important way to an explication to the learner of the world and how it works. It is a pedagogy that is less concerned with initiating a neophyte into a discipline than it is with enlarging the learner's comprehension and utilization of knowledge for general understandings. It is a pedagogy ever on the alert for the opportunity to spin out from a point of study to larger and wider ranging connections with other realms of knowledge, other concerns. It seeks to integrate knowledge, to impart skills, to invite the learner to participate in learning that which every person needs to know.

There is a spirit to general education pedagogy. It is something of a frame of mind, a manner of teaching and planning for instruction, that raises questions, draws learners out, makes connections, interprets, lingers on an observation about the where, or why, who or when of the origination and character of some knowledge, that nudges the learner to use the knowledge and to grow in skills and confidence. This spirit, elusive but essential, and refracted into a multitude of variations by the varying characters of the general education instructors, animates general education pedagogy.

To be a part of the distinctive general education curriculum, a Tier I course ought to have certain general, overall attributes in addition to those to be singled out by the criteria. In respect to what is taught, and how it is taught, a Tier I course ought to:

- show the interrelatedness of knowledge, life, events and phenomena on this Spaceship Earth;
- help learners expand and make more accurate their global perspectives;
- be infused with an humane perspective;
- awaken the learner to a consciousness of the future;
- broaden the learner's awareness of the commonalities and uniqueness among the peoples of the Earth;

- impart to the learner a sense of being a participant in the dialogue of the common learning;
- give learners the opportunity to learn about values, their own and others, and to understand the origins, the shaping and influences of behavior of values.

Moreover, in respect to how it is framed, a Tier I course ought to:

- strike a proper balance between the substantive content of the discipline and the general education elements; the course should be neither watered down and made superficial; nor overladen with the necessities that derive from the grounding of a major, or specialist-to-be in the fundamentals of a discipline;
- resonate and reinforce other general education courses but not be redundant or repetitive.

Finally, satisfying the criteria and infusing in the courses the spirit of general education ought to have the effect of giving Tier I courses a distinctive, common stamp. The criteria and spirit, however, must never be allowed to become instruments for exacting excessive conformity. Each instructor must have the freedom to build on his/her own strengths as a teacher, and to utilize her/his special interests, so long as the essential integrity of the criteria and the spirit of general education are upheld. The Tier I courses should move in formation, but not in lock-step.

Characteristics and Applications of the Tier I Criteria

Overview. The Tier I criteria will be used to determine whether or not a course should be given the designation "G" for general education. A criterion, by definition, is a standard, or measure, for making judgments. The Tier I criteria will be applied to any course offered as a candidate for Tier I, and if the criteria are satisfied by evidences in the course outline and in an oral explication of the course outline, the designation will be accorded.

Characteristics of the Criteria. Each criterion is necessarily broad and encompassing. While a criterion will delineate a trait desired in a "G" course, it will not spell out exact, specific ways in which a course outline should satisfy the criterion. That specificity is best supplied by those best suited to be specific, that is, instructors in the disciplines. The criterion does not call for specific content, methods, learner outcomes, or the like, because these will vary according to the discipline and will be set forth in course outlines. Each criterion, however, will have a narrative expansion with examples and illustrations to make more clear its intent. The examples are neither exhaustive nor prescriptive, only illustrative.

Four of the criteria deal with characteristics of the knowledge of a discipline. These criteria ask that a Tier I course teach about the knowledge as well as the knowledge itself. Other criteria deal with processes that engage the learner in the use of the knowledge.

Evidences for Satisfaction of Criteria. Evidence to satisfy the criteria will be sought in the course outline and will include: course goals and objectives, course overview and rationale, the course content and materials, instructional procedures and course policies and procedures. Written evidences will be expanded and explicated by oral presentations.

Application of the Criteria. The criteria are necessarily broad, as the disciplines vary in content, materials, and character. Hence, it is necessary to apply criteria in ways that offer flexibility, that are reasonable, and that have expectations that are appropriate to the possibilities or limitations inherent in a given discipline. Criteria will be satisfied to a degree reasonable and appropriate to a given discipline. Some disciplines should be able to treat some criteria with greater depth or emphasis than other disciplines, and these may be indicated in a criterion.

A Caution. There has been concern expressed that a thorough-going fulfillment of the Tier I criteria in a course outline will cause the displacement of the proper disciplinary content of the course. This should not be the case. The integrity of the subject matter must be observed, while the criteria are being satisfied. While a Tier I course is not primarily a course for the specialist-to-be or the major, it nevertheless must have a solid grounding in the discipline. The content must be comprehensive and have intellectual integrity. The general education elements should weave through the content in a compatible not pre-emptive manner. The general education elements in many cases will be suitably introduced in the way the content is taught—or methods and/or process—in the selection of materials, and through the perspectives of the instructor.

Tier I Criteria

Following are the criteria for Tier I courses:

A. Interdisciplinary

B. Modes of Inquiry

C. Aesthetics of Knowledge

D. Implications of Knowledge

E. Reading and Writing in the Learning Process

F. Effective Thinking

G. Creativity

H. Pluralism

A. Interdisciplinary

Criterion

Is the course interdisciplinary?

Narrative Expansion

An interdisciplinary course connects with other disciplines in its family of disciplines, as grouped in families in LMC's sub-areas. An interdisciplinary course includes, along with the content unique to itself, the fundamental concepts, generalizations, principles, values, attitudes and belief systems common to other disciplines in the given family. Thus a learner studying one course in the social sciences would gain a generalized understanding of the core of shared attributes that are common to the various disciplines of social science. The interdisciplinary course should reveal to the learner the interrelatedness of knowledge.

To satisfy this criterion, each Tier I course will include as content references to the commonalities and interrelatedness of the disciplinary family and in instructional methods show the linkages among the disciplines. Also, a given course taught in an interdisciplinary manner will call upon the knowledge from other disciplines in the family in the study of a given topic.

Illustrations and Examples

An interdisciplinary course could offer as content information on the commonalities that unify a disciplinary family.

A theme or topic in a given course could be studied from the perspectives of other disciplines in the family. Thus a topic in history would be explicated by the perspectives of economics and/or political science.

Examples could be offered from the lives of scholars who have approached the generation of knowledge from an interdisciplinary perspective.

B. Modes of Inquiry

Criterion

Does the course teach the modes of inquiry indigenous to the discipline?

Narrative Expansion

All disciplines have modes of inquiry, that is, ways of generating and testing knowledge that are accepted and integral as a traditional part of the discipline. Frequently, a mode of inquiry may be referred to as a research method, but it may also be a systematic or patterned way of generating knowledge. Learning a discipline's modes of inquiry should enlarge a learner's understanding of a discipline and make available to the learner, for possible emulation, a model of inquiry.

Fields of knowledge develop in historical and social milieux. Understanding when, how, and why the modes of inquiry and knowledge of discipline came into being will add to the learner's understanding of the discipline.

To satisfy this criterion, each Tier I course will teach, as content and as method, the modes of inquiry of a given discipline, and comment on the development of the modes of inquiry and knowledge of the discipline.

Illustrations and Examples

As a way of teaching a mode of inquiry, for example, an history course should provide the learner with a kit of historical materials pertaining to an event and ask the learner to use historical methods to create an account of the event. Or, in conducting a laboratory experiment, the physical science learner could be asked to follow the steps of the scientific method.

Examples of modes of inquiry would include scientific method, literary analysis, statistical analysis, hypothesis testing, elements of artistic excellence or logic of thought.

Instances in the lines of scholars, artists, writers, or scientists that tell of the circumstances of the generation of knowledge or of break-through applications of a discipline's mode of inquiry can be included as course content.

C. Aesthetics of Knowledge

Criterion

Does the course teach about the aesthetic qualities of the knowledge of the discipline?

Narrative Expansion

The aesthetic quality or dimension of the knowledge of a given discipline is important for learners to consider in order to attain a deeper understanding of the discipline. That is, the learner should be engaged with the joy, beauty, elegance of the knowledge. Teaching this quality of the discipline should lead learners to appreciate and understand the majesty and expanding vastness of human accomplishments in the generation of knowledge and also the vastness of that which remains mysterious and unknown. A learner may learn that with the advent of knowledge comes the comprehension of ignorance.

To satisfy this criterion, each Tier I course will comment, in the content of the course, or will convey through instructional methodology, the aesthetic qualities of knowledge. This criterion may be satisfied by explicit content, but often its message may be conveyed in the process of instruction, through demonstration, by examples, or through the observations of the instructor.

Illustrations and Examples

As a way of drawing attention to the aesthetic aspect of knowledge, the learner might be invited to contemplate the intricacies and wonders of the living cell, or the learner might be led through an elegant proof or ingenious solution of a problem. The instructor could model in his/her comments an appreciation of the aesthetic aspects in the course of teaching about music, literature, art or other knowledge.

D. Implications of Knowledge

Criterion

Does the course explore these implications of the knowledge of the discipline; values, ethics and future?

Narrative Expansion

The knowledge of a given discipline will embody values and pose ethical implications, and suggest possible consequences for the future. Considering these aspects will lend to the learner's understanding of the significance of knowledge in a world where knowledge is both a commodity and power, and where the generation and use of knowledge can impact on the present and shape the future. Each Tier I course will be expected to comment on these aspects of knowledge in order to satisfy this criterion.

Illustrations and Examples

The values inhering in a discipline might be explored by examining two contrasting forms, for example, punk rock and classical music.

For a given discipline, examples can be provided that show the impact of knowledge, such as the discovery of the microbe, the theory of evolution, invention of dynamite, the concept of the unconscious,electricty, the invention of the transistor.

Trends in the generation and use of knowledge can be extrapolated into the future.

Values aspects and ethical implications of episodes in the development and application of knowledge can be portrayed and critiqued, e.g. the ethical dilemmas facing scientists who developed the atomic bomb, or genetic engineering, or development of techniques for mass persuasion and engineering of consent in politics and marketing.

E. Reading and Writing in the Learning Process

Criterion

Does the course provide opportunities for learners to develop higher cognitive skills through reading and writing?

Narrative Expansion

Tier I courses will demand the intellectual processes of analysis and synthesis, of comprehending relationships and establishing new ones. In order for learners to be able to organize facts and ideas into a meaningful framework, and in order for new facts and ideas to become integrated with personal experience, a Tier I course should require a significant amount of reading and writing appropriate to the discipline. Writing, in particular, should be used to develop thinking and to promote learning, rather than simply serving in its traditional role as evaluation instrument to measure student progress. Reading assignments should serve a similar function and this should be viewed as information, concepts, and ideas to be intellectually processed, rather than memorized.

Illustrations and Examples

In addition to, or in place of, traditional papers and lab reports, students should learn to use writing as a way to solve problems, to come up with new ideas, to record insights or areas of misunderstanding for themselves as well as their instructors. This can be done through journals, logs, and occasional brief in-class writing periods, as well as through more traditonal writing assignments. Students should view class reading assignments as examples of the processing of information and thus, in addition to "learning facts," might inquire into the manner of their presentation (e.g. the simple statement, "Columbus discovered America," should be examined for its implications). This will help students gain competency in reading and increase their flexibility of thought.

F. Effective Thinking

Criterion

Does the course provide opportunities for learners to enhance their effectiveness in thinking?

Narrative Expansion

Effectiveness in thinking includes independent thinking and critical thinking and the application of these to problem solving and decision making.

To meet this criterion, each Tier I course will be expected to contribute to the learner's capacities as an effective thinker. For the most part, this criterion would be approached through processes of instructional methods rather than content per se.

Illustrations and Examples

The enhancement of thinking effectiveness would include, for instance, teaching stragegies and content that involve learners in deductive and inductive thinking, recognition and repair of logical fallacies, operations of analysis, synthesis, analogous thinking, conceptualizing, strategies for problem solving and decision making, guessing, and the use of intuition.

Independence in thinking would be enhanced, for instance, by encouraging learners to develop confidence in their capacity to make judgments, to encourage toleration of ambiguities, to resist stereotyped thinking and propaganda, to understand and cope with pressures to conform in thinking by peers or media, and to encourage in the learner a questioning attitude and a willingness to take risks.

Course outlines might include as instructional methods various processes of instruction that model effective thinking strategies. Exam questions, laboratory problems, discussion assignments or other class exercises can involve the content and materials of the discipline as a basis for the application of effective thinking instruction.

G. Creativity

Criterion

Does the course introduce creative processes and examples of human creativity?

Narrative Expansion

Creativity, though difficult to define, is generally regarded as an important key to individual learning as well as a major source of human expressiveness. A broad description of creativity could include: the use of imagery and imagination; the use of symbols and media to convey feelings, ideas, or meanings. Also, creativity can be defined as seeing the familiar in an unfamiliar way.

As creativity is essentially a process and not content per se, in most cases it would be addressed through instructional methods. Instructional methods and/or content should affirm the worth of creativity and endorse personal creativity.

To satisfy this criterion, each Tier I course should offer learners opportunities to engage in creative behaviors and introduce and consider appropriate examples of creativity.

Illustrations and Examples

To satisfy the common criterion, a Tier I course might, for example, present, analyze, and appreciate examples of creative endeavors in the discipline.

As an exercise, learners might be asked to come up with your own personality theory, to reinterpret an historical incident, to account for an anomalous phenomenon.

Include activities such as brainstorming, conceptual block-busting, imaging, visualizations, and explore their application to real life situations.

Discussion of the varieties of creative activities.

To satisfy the particular criterion, a course in the visual and performing arts could engage the learner in a study of modes and media of creative expression, and directly engage the learners in their own creative expression. The course could culminate in a group production.

H. Pluralism

Criterion

Does the course encourage learners to consider the variety of perspectives, experiences and persuasions that impact on the society?

Narrative Expansion

In a nation and world made up of many groups and individuals, it is important to consider the viewpoints and contributions of the variety of cultures as well as the dominant culture, of women as well as men, of minority groups and their members as well as the majority group and its members. In most cases, this criteria can be satisfied by instructional processes in which contrasting views are presented and examined, open-mindedness in considering a range of data, including conflicting data, is encouraged, examples offered, and mechanisms of stereotypic, ethnocentric or monolithic thinking are examined, humanities, language arts, and biological sciences should be able to introduce course content to satisfy this criteria.

Examples and Illustrations

The contributions by persons who are identified with minority groups to the knowledge of a discipline can be noted, along with the stories of the circumstances of those contributions.

The positive aspects and strengths deriving from diversity and variety in viewpoints in analysis and problem solving may be modeled and practiced by learners.

Social and psychological theory and concepts that shed light on the mechanisms of discrimination and inequality can, where appropriate, be the subject of study.

Postscript to Tier I Criteria

All Tier I courses, when they satisfy these criteria, will have a distinctive general education character. When learners take a Tier I course, they will have the opportunity to learn the basic knowledge of the discipline, and more; they will have the opportunity to learn about the knowledge, its uses and implications. They will have the opportunity to enhance their own skills in the use of knowledge. This can happen in one course, and be reinforced and expanded as more Tier I courses are taken.

And perhaps there will be for learners a strengthening, or perhaps an awakening, of a quest to form, enrich and enlarge a world view. By world view is meant a personal way of perceiving, valuing and putting in perspective the experiences in life. A world view may for one person be relatively simple, while for another highly sophisticated; for one it may be informed by a religion or a phisosophy; for another it may be shaped by a unique and individual quest for meaning.

Should a learner take the Humanistic Studies 2TG and a course in the 3TG series, the quest for meaning and the evolving of a world view may be further encouraged. And perhaps more. If our courses have been well wrought and if we have taught them well, and if the learner has engaged us and our courses with willingness and profit, then perhaps the general education program will have achieved a high order of purpose by helping the learner undertake a lifetime of learning.

Application of Tier I Criteria and Designation of General Education Courses

Introduction

During Phase II (Spring 1982) of the Tier I Project, the criteria developed in Phase I will be applied to all Tier I courses and to any new course proposed for Tier I. These courses will be revised, as needed, to satisfy the Tier I criteria. Instructors teaching general education courses will lead in the revision of their courses, in consultation with their respective sub-area, areas, and area dean.

During the revision plan, TOP activities will include workshops to introduce and explicate the criteria. The services of outside consultants on subject matter or processes can be secured. Also available for advice and consultation will be the General Education Committee, to be described below.

In general terms, the procedure for Phase II will be this: When a course outline has been revised, or a new course outline developed, it will be submitted to the General Education Committee which will study the outline and confer with the author(s) to judge if the Tier I criteria have been satisfied. If the criteria have been satisfied in the judgment of the committee, the committee will recommend that the course be designated as general education. The structure and procedures for applying the criteria will now be set forth in more detail.

General Education Committee

1. Functions of the General Education Committee (GEC)

   The general and continuing functions of the GEC are:

   1.1 To provide advice and consultation to persons engaged in revising or developing a new course for Tier I

   1.2 To review a course proposed for Tier I for satisfaction of the Tier I Criteria and to recommend whether or not the course should be designated as general education

   1.3 To consider matters, internal to LMC or external, that bear on the general education program and to make recommendations

   1.4 To maintain an oversight of the Tier I criteria and general education program and make recommendations

2. Status of the General Education Committee

   2.1 The General Education Committee will be a standing committee as defined in the LMC governance plan.

3. Membership of the General Education Committee

   3.1 Two faculty members from each of the four areas, to be selected by the area. The term for a faculty member will be two years. During the first year of the General Education Committee, one-half of the faculty will serve for one year, in order to stagger terms for continuity.

3.2 The Dean of each area

3.3 The Director of TOP, for the duration of the Tier I Project

4. Procedures for the General Education Committee

4.1 The GEC will select its own chair.

4.2 The GEC will apply the Tier I criteria to all courses proposed for Tier I and judge whether or not the criteria are satisfied to a degree reasonable and appropriate to the discipline of the course. The GEC will recognize that not all disciplines provide the opportunity for the equal satisfaction of the criteria. Again, recognizing the variability among disciplines, the GEC will regard a course outline as a totality in making its judgment.

4.3 The GEC may call upon the author(s) and/or instructor of the course to explain and expand upon a course outline in an oral dialogue.

4.4 Recommendation will be made upon the affirmative vote of two-thirds of a quorum of the committee. A quorum shall consist of over half of the committee membership.

4.5 The GEC will keep a record of its votes on recommendations and notes on its decisions.

4.6 Meetings of the GEC will be open.

4.7 After a new course has been recommended by the GEC for designation as a general education course, the course will enter the established LMC governance process for new course approval.

4.8 During Phase II, Spring 1982, the GEC will determine if a course outline should be considered a revised course and therefore exempt from the new course approval process, or a new course. A course revised to satisfy Tier I criteria will not be considered a new course unless there has been fundamental and substantive changes in course goals, objectives, content, and/or materials.

4.9 After Phase II, new courses proposed for Tier I and substantively revised Tier I courses will be submitted to the GEC for a determination whether or not they satisfy Tier I criteria.

5. Sequence

Typically, the sequence of events for revision, creation of new courses, and designation will be as follows:

5.1 Introductory workshops will be held to discuss the criteria and revision process for instructors teaching or interested in developing Tier I general education courses.

5.2 Instructors, in consultation with their sub-area, area, area dean, will review the present course outlines for Tier I courses. The GEC will be available for consultation and advice.

5.3 Instructors, in consultation with their sub-area, area, area dean, and GEC will begin course revision. Workshops will be available to provide inputs on ways to satisfy the criteria and incorporate general education expectations into the course outline.

5.4 The revised or new course outline is submitted to the GEC, which may confer with the author(s) of the outline.

5.5. The GEC will make a judgment of satisfaction of the Tier I criteria and make a recommendation of:

  5.5.1 designate the course general education, or

  5.5.2 refer the course outline to the author(s) for further development.

APPENDIX E

LIST OF GENERAL EDUCATION CONSULTANTS, LETTER, AND THEIR CRITIQUES OF THE TIER I CRITERIA POSITION PAPER

T.O.P. CONSULTANTS

Dr. Barbara Bundy, President
Dominican College
San Rafael, California

Dr. Arthur Cohen
University of California,
Los Angeles, California

Dr. Sanford Dornbusch, Reed-Hodgson Professor of Human Biology
and Professor of Sociology and Education
Stanford University
Stanford, California

Dr. Jerry Gaff, Director for the Center of General Education
American Association of Colleges
Washington, D.C.

Dr. Arthur Levine
Carnegie Foundation
Washington, D.C.

Dr. Jeffrey Lukenbill, Vice Chancellor
Miami Dade Community College District
Miami Lakes, Florida

Dr. Terrance O'Banion, Vice Chancellor
Dallas County Community College District
Dallas, Texas

LOS
MEDANOS
COLLEGE

December 14, 1981

Dr. Barbara Bundy
President
Dominican College
Grand and Acacia Streets
San Rafael, CA 94901

Dear Dr. Bundy:

We want to thank you for taking time out at this busy time of the year to assist us in the development of criteria for Tier I of our general education model.

JOHN I. CARHART
President

Precisely, we would like you to consider and give us your written comments on the following:

- Will they indeed function as criteria, i.e. will they discriminate general education from non-general education?
- Are the criteria comprehensive?
- Do they seem to be consistent with general education theory as you know it?
- Are they central in significance to what general education should be?
- Do they seem workable?

In the next phase of this project we will be developing course outlines to satisfy the criteria. Do you have any suggestions for specialists who might help as consultants in the content and pedagogy relating to the criteria, i.e. "Modes of Inquiry," "Interdisciplinary," "Creativity," etc., etc.?

So that you understand what the "Tier I Project" is all about, we are enclosing a set of materials. (Despite the volume, it really isn't the whole load of hay!) Enclosed are:

2700 Leland Road
Pittsburg, Calif. 94565
Phone (415) 439-2181

CONTRA COSTA COMMUNITY COLLEGE DISTRICT

LOS MEDANOS COLLEGE

JOHN I. CARHART
President

- "General Education at Los Medanos College"
- "Philosophic Considerations Underpinning the Los Medanos College General Education Model"
- "A Report on the General Education Model of Los Medanos College"—an end of previous grant report to the National Endowment for the Humanities
- A memorandum from President Jack Carhart to the faculty and administrators titled "The LMC General Education Model"
- "Background and Development of the Tier I Project"

Hopefully, these won't prove to be overwhelming and that they will lead you into the position paper, "Tier I Criteria and Procedures for Their Application." (It should be hastily pointed out this paper is a working paper and has not been edited.)

If there is still some need for clarification, please feel free to call me at the college or at my home in the evening. My telephone number is (415)933-3517. If I'm not available, you might call Dr. Charles Collins, the project's general consultant. His home phone is (415)527-6278.

As Karl Drexel indicated to you, we intend to pay you an honorarium of $300 for your contribution. Because we must complete this first phase by early February, we need to have your response as soon as possible—no later than the 15th of January.

We look forward to receiving your frank and thoughtful ideas and suggestions.

Sincerely,

Chester Case
Program Director

CC:cs

P.S. For pay purposes we need to have your Social Security number. Please send on enclosed postcard.

2700 Leland Road
Pittsburg, Calif. 94565
Phone (415) 439-2181

DOMINICAN
OFFICE OF THE PRESIDENT

January 8, 1982

Mr. Chester Chase, Program Director
General Education
Los Medanos College
2700 Leland Road
Pittsburg, California 94565

Dear Mr. Chase:

I write now in response to your request of December 14 that I comment on the position paper proposing criteria and procedures for developing courses to be included in Tier I of the Los Medanos general education model. Thank you for the complete set of materials; they were most helpful in providing an historical and conceptual context for the Tier I component. I shall endeavor in the following commentary to answer the questions you ask me in your letter and to offer whatever specifically useful criticism and suggestions I can, based on my knowledge and experience in developing and teaching general education programs for undergraduate students.

Let me begin with a general comment on the entire program, including Tiers I, II and III. Judging from the document, A Report on the General Education Model of Los Medanos College, I think you have, indeed, designed and introduced into the LMC curriculum two highly original, successful and educationally worthwhile courses from a general education perspective in HS2TG and 3TG. As your evaluators have indicated, the worth and success of these latter two components make apparent the inadequacies, from a general education perspective, of the courses currently grouped in the Tier I component. You are right to wish to revise this level of the program, and specifically in a humanistically broader and conceptually more integrative direction.

It is also fortuitous, I think, that you designed entirely new courses for 2TG and 3TG and are only now backtracking, as it were, to redesign the distributional general education requirements of the first tier in accordance with the objectives, structures and teaching methods that currently inform HS2TG and 3TG. I say this because LMC needed the experience of developing such a challenging interdisciplinary course as 2TG (and the parallel faculty and staff development it involved) before tackling the even more difficult project of "liberalizing" existing discipline-based courses in the general education curriculum so that they, too, educate the student more generally.

The "re-visioning" of the Tier I courses presents a special set of problems both in theoretical design and practical implementation. As you know only too well, if the theoretical conception of the courses (singly and as an entire tier of the general education model) is not clear, coherent and practically realistic, the teaching and learning experiences for faculty and students will be frustrating rather than rewarding and the ultimate results perhaps even less worthwhile than the present freshman distribution requirements. I urge LMC to spend whatever time necessary at this point in time on revising the Tier I criteria and procedures to produce a clear, coherent and practicable model before proceding with the next phase of your curriculum development.

And now to your questions regarding the proposed criteria and procedures for Tier I.

Question 1. Will they indeed function as criteria, i.e., will they discriminate general education from non-general education?

Answer: No, in my opinion they will not--at least not as presently formulated and organized--function as criteria to discriminate general education from non-general education courses. The formulation of the attributes and goals for the Tier I courses are those generally claimed for every liberal arts course, (the extent to which they are fulfilled by any course or instructor in any college is, of course, always debatable), including those that are discipline-bound and oriented towards the requirements of majors or otherwise specialized fields of study. No one could reasonably dispute either the spirit of your position on the Tier I courses or the attributes enumerated on page 6 and the criteria on page ii ff.

The dilemma, however, is precisely that the criteria in their present formulation are only attributes and goals and not objectives; for this reason they cannot be measured in terms of faculty development or student learning. In other words, you have produced courses that look and sound good as improved general education courses on paper but which are not apt to produce qualitative change in the teaching and learning of your faculty and students.

I would ask "how?" of each of the statements listed on page 6, and of the third statement, "be infused with an humane perspective," I would ask you to define in functional terms what you mean by "humane perspective"--for again, every instructor will claim whatever he subjectively intends or understands by "humane" and these individual intentions just may not "add up" to a comprehensive coherent program with a specific identity and definite projected results. What do you, the designers and administrators of the program, want this term to mean for the Tier I component? This is not at all clear to the reader, nor are the specific means by which you propose to realize your stated goals and attributes.

Recommendation: Develop a functional set of objectives which can actually be used as means for achieving the stated general goals (the so-called "criteria" in your position paper). The degree to which the objectives are achieved and the manner in which they are accomplished organizationally and pedagogically will then become the prerogative of the individual instructor working with the GEC and area deans. If you accept this recommendation, then projected results and competencies will need to be specified by the instructors of Tier I courses and approved by the GEC. Individual preference and freedom and a healthy degree of individuality will still be maintained through the GEC procedure you propose. The hazard is that there will be insufficient commonality among the 1G courses, not insufficient diversity! But without clear objectives (which imply discernible results and competencies), I do not think you will develop, in practice, a group of courses necessarily or substantially different either from the present ones in the LMC general education curriculum or from the individual instructors' strengths and preferences. The criteria as stated are so general (and operationally vague) that you run the great risk of designing a group of courses that will be either unfocused and too general, leaving students with opinions but few skills or little knowledge; or that will be merely a subtle version of existing discipline-oriented, specialized courses, modified only slightly. Neither is desirable.

A next step is therefore in order: specification of objectives in the LMC position paper so that the individual instructors will be able to propose the means and competencies feasible for individual courses. You state on page 8 that "specificity is best supplied by those best suited to be specific, that is, instructors in the disciplines." However, unless the distinctive criteria for any special program are sufficiently clear and concrete in their articulation, and the instructors provided with a vision of the new program through faculty development, the "new" courses will remain discipline-bound and not merely discipline-based.

Question 2: Are the criteria comprehensive?

Answer: The criteria are overly comprehensive in the sense that they propose unrealistic achievements for a single Tier I course. Moreover, there seems to be troublesome confusion of skills, methods of inquiry and content (or substance) in the formulation of the criteria (rather, the goals) for the courses. My fear is that in aiming to do too much, and in an unintegrated fashion, the courses will not educate the student effectively or generally. It is not clear to me how the program designers see the relationship of skills (criteria E.F.) to methods of inquiry (B.) to discipline-based knowledge (C., D.) to themes such as "creativity" and "pluralism" (G., H.) to what is called "inter-disciplinary".

My understanding of the program based on Collins' and Drexel's excellent statement of the LMC general education model in the "Philosophic Considerations Underpinning the Los Medanos College General Education Model" is that the Tier I courses are to be intradisciplinary as so defined in the above paper. The 2TG and 3TG courses are demonstratably interdisciplinary. The intra-disciplinary goal for a single Tier I course is in itself an enormous one, given that it requires a student to know the methods of inquiry of (1) a single discipline and (2) at least in cursory fashion the methods of inquiry of other disciplines in that "family".

I think it is completely unrealistic to expect that a student can meaningfully or accurately study a theme or topic in a given course "from the perspectives of other disciplines in the family" unless the student is concurrently enrolled in other discipline courses based in that "family". After taking several Tier I courses, a student could profitably take an intregrative seminar--a capstone course--in which the intra- and interdisciplinary perspectives of the various Tier I courses are the central focus of study. But to make this the aim of every Tier I course is educationally unfeasible and an impossible task, unless you are "clustering" various Tier I courses for purposes of explicit comparison and contrast. I would therefore recommend that the "interdisciplinary" criterion be dropped from the 1G courses and the "intradisciplinary" criterion substituted for it.

Although I think I grasp what you wish to accomplish with criteria C., G. and H., they remain vague in their formulations and their relation to the learning of skills, methods of inquiry and content of discipline is not clearly articulated. Unless the aesthetics of knowledge, e.g., is more precisely defined (do you mean here a study of form and the "beauty" that may result from the integrity of a given knowledge system?), the concept will confound the best of instructors and students. The same is true of "creativity" as you have formulated it. If the creativity and formal aesthetics of each discipline and each body of knowledge represented in the Tier I courses pervade each course throughout and is more evident in process and pedagogy than in content, then perhaps they should rather be approached in that way.

Recommendation: I would propose the following re-organization of the criteria (goals):

I. Skills: Each Tier I course should teach effective thinking, reading and writing throughout each course as means for problem-solving and understanding the nature and value of knowledge.

II. Modes of Inquiry: Each Tier I course should examine the various methods of inquiry (the "discipline") proper to its field of study. The question of how the X (political scientist, scientist, poet, etc.) conceives of and demonstrates creativity should also be addressed relative to the modes of inquiry of the discipline.

III. Knowledge: What knowledge does X acquire through his modes of inquiry? What is the value of this knowledge for the individual and the society? What are the implications of knowledge in this discipline for the individual and the society, now and in the future?

IV. Human Values: Most broadly, what is the human value and significance of X? In this, the final portion of the course, students might be introduced to the societal issues of energy, justice, ecology and economy in relation to the discipline of X, thus preparing them for 2TG. Here the questions of values and ethics could be addressed as well as the issues you have stated under "H. pluralism".

Such a structure for the Tier I course would (1) build understanding coherently and systematically within each course and (2) offer instructors--and students--a general education framework. The student would be able more easily to compare and contrast the various disciplines of the 1G courses if there were such a framework used for each of the courses in this program component. Again, this structure would allow the instructor considerable flexibility and individuality while providing much needed cohesiveness, distinction and commonality to the various courses in this wide-ranging discipline-based tier.

Questions 3 and 4: Do they seem to be consistent with general education theory as you know it?

Are they central in significance to what general education should be?

Are they workable?

Answer: These are the most difficult questions to answer since no one is clear any longer about what distinguishes general from non-general forms of education and what should constitute a "core" of general knowledge which undergraduate institutions might in good conscience require of all students to prepare them for present and future life on this planet. I think that the criteria you propose (with revisions forthcoming to address the problems highlighted above) are certainly an improvement, from a general education perspective, upon the generic discipline-based courses presently in the LMC curriculum. They indicate a broadening of concerns and include more value-oriented issues in the courses and help the student to inquire into the nature, purposes and values of various fields of knowledge; and to this extent yes, the criteria do seem consistent with general education theory as I know it. Moreover, the teaching of the basic skills of effective reading, writing and analytical thinking throughout the courses is also properly the concern of general education, in my view, and I applaud your effort to make critical skills as central a concern of freshman and sophomore education as the content of academic disciplines and societal issues.

However, the program base proposed for this tier is disciplinary and that is problematic for me. My experience has shown me that discipline-based courses--except in rare instances where we have an extraordinary teacher or a qualitative change in pedagogy--frequently remain just that: introductory or specialized courses in the disciplines, even when the attempt is made to re-shape them with respect to skills, modes of inquiry or themes. And academic disciplines, finally, have very little to do with the actual needs of students to understand our complex, rapidly changing world and themselves and to survive. Why this should be so is related to the disciplinary training of college and university faculty and to our general reluctance to experiment with a more appropriate and innovative form of education for undergraduate students. Yet the practicality remains that LMC (and almost every other undergraduate institution across the country!) has to work with existing materials--personnel and curricula--and develop these rather than introduce all new courses of a non-disciplinary nature.

The proposed criteria and procedures for Tier I will yield a more general educational experience for the student if--and, in my opinion, only if--the faculty and staff embark on a program of faculty development while they begin redesigning the goals, objectives and criteria for Tier I courses in the Spring 82 phase of the project. This development should involve as much attention to teaching effectiveness and pedagogy as to theoretical design; for, finally, the skills proposed will be taught effectively throughout each course and the various general education objectives realized in an integrated way only to the extent that faculty talk and plan together, as in the design and implementation of the 2TG course. I think your own successful model here will be your best adviser, along with some choice outside consultant-facilitators for the next phase of program development.

I think the proposed GEC structure and procedure is a good--and workable--only if it is attached to an ongoing faculty development process. This might, e.g., involve the GEC in workshops, along with the prospective instructors of Tier I courses, and with the help of experienced facilitators, so that the pedagogies most appropriate to the 1G courses, along with the objectives for transforming discipline-based courses into the proposed new general education courses, can be discussed and debated.

I recommend, further, that LMC develop a special course evaluation instrument (which could be most useful to the GEC in approving or requesting revision of future Tier I courses) which assesses the courses specifically with respect to the general education criteria. If, upon implementation of the Tier I courses, the criteria are still unclear or unworkable, this will become quite apparent in student (and staff) evaluations and will become an instrument for ongoing development of the general education curriculum.

I hope that the above observations of an outsider will be helpful to you and your faculty and staff in the continuing development of a comprehensive general education model for Los Medanos College. You certainly have good--and well deserved--support from the NEH and you have had some first-rate theory and practice in the person of Charles Collins, whom I much admire. Good luck to all of you. I shall look forward to reading or rearing of your program in the future!

Sincerely,

Barbara Bundy

Barbara Bundy
President

BB:cd

GENERAL EDUCATION AT LOS MEDANOS COLLEGE

This is a comment on "A Position Paper; Tier I Criteria and Procedures for Application," December 1981.

In order to associate the Tier I paper with the events that preceded it at Los Medanos College I reread several papers: A Report on the General Education Model of Los Medanos College (March 31, 1980); "Philosophic Considerations Underpinning the Los Medanos College General Education Model;" "General Education at Los Medanos College: A Curricular Model;" and "Background and Development of the Tier I Project." These papers trace the rationale for and the history of the general education plan as it is developing at Los Medanos. The plan has been eight years in the making and Tier I can be understood only by placing it in that context.

The Los Medanos College general education planners understand the need for general education and they state that need eloquently. They note that general education strives toward teaching principles, the broad as opposed to the specific. They understand also that in education the specific often drives out the general since the specific is easier to teach, hence easier to show progress. But they know that the specific is also less applicable to a variety of situations and soon obsolete. As they put it, " The more rapid and profound the changes in a society, the less reason there is for early specialization in education ("Philosophic . . .) p. 13).

The planners recognize a second assumption undergirding general education, that individual needs conflict with social needs. The idea that general education is necessary for social cohesion is stated implicitly throughout the documents. Also stated is the idea that general education is necessary for everyone, not merely for an elite group; questions of global survival are too imminent to restrict general education to a small segment of the population. Since state reimbursement schedules have usually favored the socially useful ahead of the individually beneficial, the community college must pursue the socially useful in education.

And since the 40 percent local contribution to college support has dropped and is dropping each year, there is all the more reason for the socially beneficial as reflecting state interests.

Because the planners recognize that general education is necessary for all people in a democratic society, they have constructed their program to focus the students' attention on such social issues as energy sources and conservation, ecology, nuclear weaponry, population expansion, and similarly far-reaching global concerns. They know the antagonists to general education are those who feel that the individual, not the society should be the proper focus of attention. They are less concerned with personal development, more with the development of a social awareness in each of their students.

By way of developing the general education plan for the college the college leaders built on two sound principles of college management: an educational plan must be developed, articulated, and pursued by the administration; it must involve a sizable proportion of the faculty. The development of professional instructors who understand and can work with general education ideas and courses has been a feature of the plan from the start. The college leaders recognize that professional development is essential for fostering instructors who can design and effect instruction on broad issues beyond their disciplines, who can work with other instructors in preparing classes that reach beyond the bounds of a single academic area.

Although they do not so state the planners seem to recognize that they are at the forefront of the emerging field of general education in the community college. They mention the number of people from other community colleges around the country who have sought guidance in developing their own general education plans. They do not discuss the emerging field of general education itself, a field that Los Medanos College is helping to bring to life after several attempts earlier this century failed. General education is developing its own jargon, goals, and training plans that are based on much faculty interaction. It must be developed by the community colleges indigenously, by faculty who have come out from behind their classroom doors to work with others, by faculty who can learn to trust one another and to trust the administration.

The development of general education at Los Medanos College has been based on a plan drawn in the mid-1970s. In striving to develop courses that lead students to attend to social concerns the leaders have depended on a professional development plan that has involved a sizable proportion of the faculty. Because of their concern for societal issues they began with an interdisciplinary theme-centered course at their second tier. Thus they skirted the first tier courses that were to be intradisciplinary, saving them for the current effort. The first tier and second tier courses in humanistic studies were worked out however and common syllabi for the first year courses were adopted in 1979.

The December 1981 position paper describes the process currently underway that will bring the Tier I courses into the general education model. The paper follows the earlier papers in its reflection of the planners' determination to involve sizable numbers of the faculty in developing courses that will engage the learners to help them to apply knowledge from several areas to societal issues. The Tier I courses are to take the learners from the standpoint of a single discipline to see how connections can be made with knowledge coming from other areas. And yet, in the interest of a "general education pedagogy," the planners want to allow each instructor sufficient freedom to "build on his/her own strengths as a teacher, and to utilize her/his special interests...." (p. 7).

The document states that the Tier I courses should have certain attributes such as showing the interrelatedness of knowledge, helping learners understand their global perspective, broadening their awareness of commonalities among people, etc. These goals should be built into Tier I courses with the caveat that the courses should "strike a proper balance between the substantive content of the discipline and the general education elements." (p. 7). Courses that strive toward such goals should meet certain criteria and when they meet those criteria they should be designated as part of the Tier I general education sequence.

Eight criteria were stated. These criteria are to be applied to the courses submitted for consideration as part of the Tier I general education plan and passed on by a general education committee. (Standards for membership on the committee are stated on pages 31ff.) The criteria are varied; some are excellently stated, others need improvement. Following are the criteria:

A. Is the course interdisciplinary? The committee is to determine whether the course builds on several disciplines rather than just one. This seems essential for a general education course.

B. Does the course teach the modes of inquiry indigenous to the discipline? The course is to consider the ways that knowledge is generated in the discipline within which it is grounded. This is good because it shows students how evidence may differ from one discipline to another.

C. Does the course teach about the aesthetic qualities of the nature of the discipline? This criterion seems the least defensible. The aesthetic aspect of knowledge seems to be most difficult to teach and least applicable to the overarching general education plan which is to focus the students' attention on societal issues. The statement within the criterion mentions, "Teaching this quality of the discipline should lead learners to appreciate and understand the majesty and expanding vastness of human accomplishments in the generation of knowledge and also the vastness of that which remains mysterious and unknown." (P. 16). The criterion demands too much too soon.

D. Does the course explore these implications of the knowledge of the discipline; values, ethics, and future? This criterion and the one that follows are the best in the set. The course that adheres to this criterion is supposed to show students how knowledge gained in one area affects life and society in a variety of ways. The examples given are apposite and would lead students to understand the ethical dilemmas in expanding knowledge.

E. Does the course provide opportunities for the learner to develop higher cognitive skills through reading and writing? The decline in reading and writing has been one of the hallmarks in education at all levels during the past 15 years. Many students come to community colleges as functional illiterates. The astute community college planner recognizes that teaching literacy will be an essential component of general education in the coming decade. The community college courses must demand more reading and writing of their students.

F. Does the course provide opportunities for the learners to enhance their effectiveness in thinking? The criterion for a course to enhance students' ability to analyze, synthesize, conceptualize, etc. seem to be subsumed under some of the earlier criteria. However this criterion is important because it refers the instructor directly to an examination of the quizzes, laboratory problems, and other class exercises through which the student is led to think. The criterion is useful if it but encourages the instructors to build sets of examination questions that range across the levels of the taxonomies of educational objectives.

G. Does the course introduce creative processes and examples of human creativity? This criterion is useful and certainly acceptable within general education but it seems less important than some of the others. Creativity is an individual process; the general education plan seeks to make students aware of societal issues. The idea could be to show students how certain societies encourage creativity while others discourage it but that seems not the intent of the criterion as stated.

H. Does the course encourage learners to consider the variety of perspectives, experiences, and persuasions that impact on the society? This criterion has to do with pointing up the cross-cultural, pluralistic nature of society. As such it is laudable and worth maintaining. The Tier I courses could point up the contributions of people from different cultures. And every attempt to break down prejudices and stereotyping is certainly warranted.

All the criteria could benefit from more illustrations and examples. It might also be useful to rank them in order of importance.

My ranking of the criteria from most to least important:

E. Course must demand reading and writing.

D. Implications of knowledge are basic to the entire plan.

F. "Effectiveness in thinking" is an important concept. However, the criterion should be reworded so that its meaning is clear. It should refer to an examination of classroom activities and, especially, tests that demand high-order intellectual processes. The submission of quiz items should be part of the approval process.

B. Differences in what constitutes truth in the various disciplines are important.

A. Interdisciplinarity is part of general education.

H. Cross-cultural differences should be made clear in every discipline.

The list could end there. Creativity (G) may be too much to ask of a student in a Tier I course. If it occurs, consider it fortuitous. The aesthetics of a discipline (C) can be subsumed within "modes of inquiry" (B).

The paper has a few serious omissions.

1) How many disciplinary courses will be designated with a "G"? Will every course be eligible for inclusion? If so, if there are no limits, it might be possible for an astute instructor to place the most esoteric course within the structure.

2) How would a course be delisted? Is a course once designated with a "G" there forever? There seems to be a need for a monitoring system

or for periodic reapplication on the part of instructors whose courses have been accepted and want to keep them on the list. The necessity of continual monitoring is pointed out inadvertently in a Report on the General Education Model . . . in which the question is raised as to whether the third tier courses have drifted.

3) Although it is not specifically a part of the position paper a student management plan seems certainly needed. The planners recognize that general education is necessary for all their clients except for those who take only short courses for personal benefit. At what point is a student required to enter the general education cycle? With an effective student management plan all students could be so required after they had taken, say, three courses at the institution.

4) It might be useful to show the instructors how the support services can be better tied directly to the courses. Some of the earlier documents allude to learning laboratory exercises that key to the Tier II courses but more of that probably remains to be done.

5) Will students be assessed at course entry? The assumption is that all students may benefit from the general education courses, hence all should be steered toward them. This yields a heterogenous group that may be difficult to teach in all applications.

A few additional comments: The plan currently seems to allow students to enter the Tier II courses prior to their taking a disciplinary course at level I. This seems a weakness of the overall plan, one that will be mitigated when the Tier I courses have been set in place. For that reason the proposal should be pursued expeditiously.

The requirement of two semesters of professional development before an instructor is qualified to teach the second tier course is a decided strength of the entire program. Will such a stringent requirement be applied to Tier I courses? If not, it may be difficult to maintain the criteria as stated.

It seems essential to further the work on the Tier I courses. The three or more options that exist for each of the six general education areas provide little more than a set of distribution requirements that has not worked well in the past. These courses must be brought into harmony with the overall general education plan. The "Position Paper" is directed toward bringing those courses into line. It has the strength of being part of an overall plan and as such, has every probability of succeeding.

Arthur M. Cohen
December, 1981

STANFORD UNIVERSITY, STANFORD, CALIFORNIA 94305

SANFORD M. DORNBUSCH
REED-HODGSON PROFESSOR OF HUMAN BIOLOGY
AND PROFESSOR OF SOCIOLOGY AND EDUCATION

January 12, 1982

Chester Case, Program Director
Los Medanos College
2700 East Leland Road
Pittsburg, California 94565

Dear Chet:

It was a pleasure reviewing your paper on Tier 1 criteria, for it indicates a continuation of the progress Los Medanos has been making in the field of general education. I've learned a lot working with you, and it's obvious you've learned a lot working with each other. This draft already consitutes a remarkable basic position paper.

Enough of the compliments, although they are sincere. There are numerous points I would like to suggest for your consideration. None of them is a fundamental criticism of your total approach; rather, each seeks to be a minor improvement on a sound structure.

Page 1

I believe that the purpose of the criteria is not merely to determine whether or not a course is Tier 1, but rather to assist instructors in developing courses that meet these criteria.

Page 2

It might be appropriate to insert a sentence or two that makes clear the unusual position that Los Medanos is taking for its disciplinary courses. Within each discipline there is an intent to move towards some of the abstract characteristics that have been important in the development of interdisciplinary courses within general education at Los Medanos.

Pages 4 - 6

Beautiful.

Page 7

I would rewrite the paragraph on the specialist-to-be. In order not to attack the development of future specialists or majors, a proper concern of teachers in the elementary disciplinary courses, a somewhat more discursive attempt to make clear the dual function of the disciplinary course for the potential major and for general education seems appropriate.

Page 8

A serious question arises as to whether a potential course must meet all the criteria fully, or whether there can be some degree of judgment as to the utility of forced attempts to meet all criteria. In my own judgment, instructors should be urged to meet all the criteria and should be encouraged to report honestly those for which they feel it is unlikely that their efforts will be either intensive or successful. If instructors were to believe that the total assessment would not be rigidly bound to include each and every criterion, candor in the reporting process would be more likely.

Page 10

Some of the material on page 10 could be used for the expansion of page 7 and then dropped from page 10.

Page 12

An opportunity exists for communicating to all instructors the way in which intra-disciplinary courses relate to general education. The phrase, "is the course interdisciplinary?" does not communicate. Perhaps a stress on what is gained by comparison and contrast of a particular disciplinary approach to the perspectives of other disciplines would do the trick. The point is not to adulterate the discipline, but to make clear what it contributes in relationship to other approaches.

Page 14

In keeping with the spirit of page 12, I would suggest an emphasis on modes of inquiry in general. Those modes of inquiry that are specific to a single discipline should be presented in detail with clarification of the reasons why these methods are preferable for the topics under investigation. Such discussion necessarily must include alternative methods of investigation, their assests and their deficiencies.

Page 16

I would restate the criterion to be "does the course emphasize the esthetic impact (beauty or elegance) of the knowledge of the discipline?"

Instructors should be given more examples from literature, mathematics, physics, economics, etc. of the remrakable esthetic quality which can be gained as one explores the mysteries within a field. This emphasis is completely compatible with attempting to produce self-motivated learners.

Page 18

I believe that the overlap of ethics and values with each discipline goes beyond a discussion only of the implications of disciplinary knowledge. Ethical and value issues arise prior to the search for knowledge with respect to the choice of problems, the limitations on use of human or animal subjects, the diffusion of knowledge to persons who may misuse it.

Because I believe this topic is appropriately a part of general education at Los Medanos, I do not believe that discussion of the future uses of knowledge should be included in the same category.

Page 24

It might be helpful to subdivide this criterion into discussion of creative processes and attempts to get learners to engage in creative activities. These are two forms of development, and both are vital.

Page 26

I would prefer that the criterion reflect exposure to diverse perspectives and have pluralism as an important underlying concept in the discussion. Open-minded consideration of alternative models will be the more inclusive concept, and the utility of multicultural perspectives is a sub-class within that emphasis on diversity.

All in all, this position paper is so thoughtful that I found it difficult to criticize. How I wish Stanford would apply criteria like these to the education of our students. In my opinion, the careful deliniation of objectives that you are undertaking will not be inhibiting but will encourage creative development of new forms of disciplinary education in a liberal arts context. Good work.

Sincerely,

Sandy

SMD/ms

cc: John I. Carhart
Karl Drexel

aac

Association of American Colleges
1818 R Street, N.W., Washington, D.C. 20009
202/387-3760

December 23, 1981

Chester Case
Program Director
Los Medanos College
2700 Leland Road
Pittsburg, CA 94565

Dear Chet:

Your materials arrived last week, and I have read and re-read the position paper, Tier I Criteria and Procedures for Application, that was prepared by the Study Group. Overall, I am impressed with the process that has been adopted, the amount of time that has been devoted to the important task of identifying criteria for general education courses, and the content of this draft. I do have a number of reactions, however, which I will share with you and the Group. As you may know, I am working on a manuscript on the current revival of general education curricula around the country, and it so happens that my attention is now focused precisely on course development. So I will give a few overall perspectives that emanate from my writing before turning to your specific questions.

1. Schools around the country are grappling with what to do about criteria for general education courses, if anything. One issue is whether to specify criteria explicitly or not; the step you have embarked on is important from my point of view. A second issue is how tight or loose to make the criteria. You have resolved this in a reasonable fashion by a) stating a preamble as well as several criteria, the spirit as well as the letter of the rules, and b) indicating that the criteria are to function as guidelines with additional specificity being the responsibility of individual faculty members. In keeping with the recommendations, I think it essential that there be a balance between overarching institutional purposes and the values, expertise, and styles of individual teachers, as either by itself can be disastrous. A third issue is whether to establish broad criteria that apply to every course or area-specific criteria that apply to courses only within the natural sciences or humanities, for instance. You have decided that all courses should meet certain general criteria but that there should be flexibility for meeting them differently in different fields of study. This sounds fine to me, but you should know that others (such as the Franklin and Marshall materials I am enclosing) opt for area-specific criteria. Fourth, some schools establish criteria by the faculty as a whole, while others establish sub-groups to hammer out criteria for the various areas. I think your college-wide approach makes more sense for Los Medanos, since it is a reasonably small community college with a distinctive program, and a tradition of working together to arrive at a working consensus. Frankly, most other institutions couldn't succeed with your approach. In all of these matters, your approach to establishing criteria for general education courses are in keeping with exemplary current practice.

2. Criteria for general education courses must serve two purposes. They must guide course design and instruction to the desired ends, and also they must allow the General Education Committee to have a basis for selecting courses and monitoring their effectiveness. My impression of the statement that has been prepared is that it serves the first purpose very well but that it may lack the specificity for doing the second one. My sense is that the Committee may find it difficult to apply some generalizations to individual courses, to decide about how many of the eight criteria must be met to what degree to be accepted, and to explain its judgments to faculty members. In short, additional sharpening of the criteria would be useful. I am sure that your colleagues will have helpful ideas on how to do this, but a few suggestions follow.

3. As you probably realize, the utility of any set of criteria can only be determined by how well they work in practice. Only so much can be decided in advance, and there will always be a lot of "judgment calls" in putting together a curriculum. Rather than wait until everything is worked out to perfection, I would urge you to complete this phase as well as you can and then start using the criteria and gaining experience, because that experience will provide the best guidance about the utility of the criteria and about how they may be improved. This amounts to simply encouraging you to keep on with your game plan.

4. I am impressed with your distinction between the spirit and the letter of the criteria. In fact, I am so impressed with the discussion of the spirit of the criteria for Tier I that I wonder if that doesn't point the way to some quite specific and usable criteria that may have been overlooked because they are so obvious. Five principles came through to me. A general education course should a) involve an active pedagogy, b) select "important" content (I like to talk about generic skills and generic knowledge as a principle of selection), c) be aimed at the non-major student, d) spin out connections with other fields of knowledge and other concerns, and e) teach about knowledge as well as knowledge itself. I think I would feel quite comfortable in using these as guiding criteria for designing courses or certifying courses as serving general education purposes. Was there some reason the Study Group was not content with these and decided to spell out the eight additional ones, and presumably more definitive ones?

5. The criteria may be sharpened by including a discussion about what a general education course is not. Running throughout the document is a set of assumptions that could be formalized in an additional section. For instance, a general education course is not to be a) an initiation into the discipline, b) simply a "coverage" of the field (The enclosed paper by Leon Mayhew is excellent on this point), c) a superficial survey of a field but a highlighting of certain central ideas, methods, or facts, d) isolated from other fields or concerns, and e) limited to content but includes self-conscious reflection about that knowledge and its implications. I think that some such statement would help to sharpen the meaning and utility of the criteria for Tier I courses.

6. A word about operations. It is great that the grant will allow the faculty to have workshops to "introduce and explicate" the criteria, as stated on page 30. Not all schools are so lucky. But my guess is that more is needed from these workshops. Many faculty may need substantive discussion to learn about alternative modes of inquiry in various fields and to explore the implications of knowledge before they can teach them. Also, I am wondering about the statement that the Committee will work with faculty to help develop appropriate courses. While that sounds good, I wonder whether all Committee members will have the time, interest, and skills to assist their colleagues. Would it be better to designate someone or a small number to serve that developmental purpose and allow the Committee to act in a decision-making capacity?

7. A few thoughts about some of the eight criteria. Why is interdisciplinary the first one in a Tier that is supposed to stress intradisciplinary approaches? I would think some things like fundamental ideas of a discipline directed at the non-major would be the key defining characteristic. Is the aesthetic criterion, or even the creativity one, as important as the others? I would tend to see them as less generalized criteria but ones which may be very important to some fields or to some faculty. Is the mater of pluralism one of seeing a variety of perspectives that impact on society or on knowledge (p. 26)? I would think the latter, although it states the former.

8. A few miscellaneous questions. Is there a need to limit class size for certain courses or purposes, such as encouraging writing or considering implications of knowledge? Should the Committee err on the side of approving too many courses (generosity) or approving too few (toughness)? What is the best balance between relying on old courses (and running the risk that there will be little change) and insisting on new courses (and using up a great deal of time and energy)? I don't have a strong feeling about these matters, but these are issues that should be considered.

After having stated my own reactions, let me now turn to your specific questions. Yes, I believe that the criteria will differentiate general education courses from others. Yes, the criteria are comprehensive; in fact, I think there may be so many (both in the preamble and the eight ones discussed in more detail) that it will be difficult to give equal weight to all. If they could be shortened and sharpened, they probably would serve better. Yes, they are consistent with general education theory and emergent practice aimed at improvements; several schools are working to establish specific criteria and adopt college-wide standards of the sort you are considering (rather than simply allowing each department or division to make separate decisions about what is appropriate). Yes, the criteria do seem central in significance, but as I mentioned, they might be refined even further. Yes, they seem workable, especially if they are seen as a first approximation and subject to revision rather than set in concrete.

Chet, you asked about consultants, and I am willing to discuss possibilities with you. But I think it might be more fruitful for us to do that by telephone so we can discuss what kinds of things you want consultants to do. Why don't you give me a ring when you get to that point?

I hope these comments are of some value to you and your colleagues as you proceed with the very important task of strengthening your curriculum. If I can be of any further assistance, don't hesitate to ask. Please keep me informed of your progress and best wishes!

Sincerely,

Jerry

Jerry G. Gaff, Director
Center for General Education

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THE CARNEGIE FOUNDATION
FOR THE ADVANCEMENT OF TEACHING

1785 MASSACHUSETTS AVENUE, N. W.
WASHINGTON, D. C. 20036

January 7, 1982

Mr. Chester Case
Program Director
Los Medanos College
2700 Leland Road
Pittsburg, CA. 94565

Dear Mr. Case:

I have now had an opportunity to read through the material you sent me. Let me first congratulate Los Medanos College for a well thought-out, imaginative general education program. You deserve credit both for the procedure by which the program was developed and for the overall design of the three tier curriculum.

I am quite enthusiastic about tiers one and two. As I began to consider the revisions of the Tier one, I sought three pieces of information:

1. A description of the goals and purposes of tier 1 - What Tier 1 is intended to accomplish.
2. An explantation of how tier 1 relates to tiers 2 and 3 - What the new portion of the curriculum is expected to achieve vis-a-vis the parts already in place.
3. A statement of what tiers 1,2, and 3 are intended to achieve in combination- in essence a definition of general education at L.M.C.

It seems to me that these are the considerations from which Tier 1 criteria should flow. After all a curriculum has no meaning or integrity of its own. I think of curriculum merely as a road-the path a college uses to transport what it already has-(a particular group of students, a faculty of certain background and abilities, a specific pot of resources-financial and otherwise, and a history and traditions)- to what it hopes to achieve-(a set of goals; a vision of what the individual who completes a particular program should look like).

With regard to Tier 1 I sought to learn whether the proposed criteria would 1) achieve the specific objectives of the Tier 1 program and 2) complete the Los Medanos College general education program, embrace all of the remaining goals for L.M.C.'s general education program not now being achieved by Tiers 2 and 3.

After reading the material I was sent several times, I might say that the curriculum design of the L.M.C. program is clearer (crystal clear) than the purpose of the program. Tier 1 is somewhat confusing to me. Statements in Charles Collins' 1978 Danforth paper (p6 ff.) Appendix B of the 1980 National Endowment report, and the proposed position paper don't quite mesh.

This may seem trival, but I believe it is enormously important. The document that you are preparing is more than a position paper. In essence, it is a charter or constitution for Tier 1 of the general education program-a document the curriulum will stand or fall upon in years to come. Because Tier 1 is the last piece of the program, the document assumes an even more special quality. In essence, it pronounces the curriculum complete. With the addition of this last element of the program, Las Medanos College should be saying that its general education curriculum how mirrors the L.M.C. vision of a general education. Consequently clarity and percision in the document are essential.

My greatest concern regarding the position paper focuses not upon the criteria for tier 1, but upon the way they were derived. Pages 4 through 7 of the position paper provide the philosophly undergirding tier 1. The section on "General Education and Education is General" lists a series of requirements which all courses are expected to fulfill. They are appealing, but I have encountered good, even excellent courses which do not have all there attributes. In fact, having to meet each of these requirements would have reduced the quality of some of the courses.

The "preamble to tier 1 criteria" seems a bit diffuse. It covers a good deal of ground, but a definition of the purpose of tier 1 is somewhat elusive. It gets lost in the broad ranging discussion on pedagogy.

As result the list of attributes on pages 6 and 7 seems to come out of the blue. It is not clear to me why a tier 1 course should exhibit these characteristics. It is difficult for me to see what whole emerges from the sum of the individual attributes.

I have questions about a few of the attributes noted on pages 6 and 7. The fourth characteristic seeks to "awaken the learner to a conciousness of the future." I wonder why the past and present were omitted. The second and fifth attributes seem to overlap a bit -- global perspective and awareness of the commonalities and uniquenesses among the peoples of the earth. The meaning of "being a participant in the dialogue on common learning" is somewhat abstruse. I see some tension in the notion of striking a proper balance between the discipline and the general eduation elements. I think of the tier 1, courses, though I may be wrong, as using the disciplines to explore the general education agenda. In essence, the disciplines would be used as tools- a means to acheiving a larger end, a general education.

I would propose a slight recasting of pages 4-7. I think I might consider omitting the criteria for all courses- "General Education and Education in General." On the "Preamble to Teir 1 Criteria," I would be inclined to offer an explicit two or three sentence definition of the objectives of tier 1. I might expand upon these sentences in several paragraphs that follow. I would then explain how tier 1 relates to tiers 2 and 3 and how all three achieve the purposes of general education at L.M.C. Then I would link the attributes on pages 6 and 7 directly to the difinition of tier 1. I might offer an explanatory paragraph for each of the attributes. I think these minor changes would alleviate all of the points I raised.

Now for the criteria. I think the idea of criteria is excellent. I commend you for you work. Most institutions fail to establish the detailed and explicit criteria of L.M.C. The result is usually a politically determined, pork barrelled general education program.

The flexibility suggested in planning and teaching courses as well as applying criteria is very important. I wonder about the decision not to emphasize specific learner outcomes. Wouldn't it be more valuable to stipulate the desired outcomes of the program than the pedagogy or curriculum that should achieve them. Is this not more consistent with the flexibility proposed?

The procedures for gathering evidence of satisfaction of the criteria make good sense (p9). The note of caution is wise. But in stressing the importance of the disciplines there is the same tension over discipline verses general education that I mentioned earlier. Are the tier 1 courses to be generalized introductions to the disciplines or applications of the disciplines to general education? An explicit difinition of tier 1 will go a long way to eliminating this tension.

I like the way the criteria are laid out- "criterion," "narrative expansion", and "illustrations and examples."

It was not clear to me, however how the criteria for Tier 1 courses related to the attributes cited on pages 6 and 7. I would have expected the criteria to reflect the attributes. I think it would be useful to clarify the relationship between the two.

As for the specific criteria, I would offer the following comments:

A. interdisciplinary - This criterion surprised me. Earlier documents went to pains to distinquish between interdisciplinary and intradisciplinary portions of the general education program. Tier 1 was regulary described as intradisciplinary, not interdisciplinary.

This criterion is an ambitious one, which will be more readily acheived on paper than in the classroom. Most faculty, as you know, are poorly equipped to to teach the principles common to other fields in their disciplinary family. Release time and in-service development will be critical here.

I believe it is valuable for students to understand the shared attributes common to the discinplines as this criterion seeks to accomplish. But I also think it is important for students to study in a systematic fashion how disciplines differ and what the differences mean.

B. Modes of Inquiry - The courses stressing modes of inquiry that I have seen around the country are notoriously bad. There are exceptions such as Herman Epstein's introductory biology course at Brandeis. By and larger the problem is that students lack a sufficient body of knowledge regarding the disciplines to be able to go a step further and make inquiries into them. Faculty have a difficult time teaching the methods of a discipline rather than its content.

With these problems in mind, I think the modes of inquiry approach has strengths even beyond those mentioned in the text. Above all, it teaches students how to frame questions and how to find answers. I think this is perhaps the most important consequence of a college education. Paragraph 2 on page 15 seems weak to me- incomplete, unparallel, and overlapping.

C. Aesthetics of knowledge - This is interesting, but it seems a bit precious.

D. Implications of Knowledge - Yes, excellent. The example of punk rock and classical music, however, doesn't seem to go to the heart of the matter.

E. Reading and Writing in the Learning Process - Terrific. It seems to me that all of the criteria rest upon this one. I would be inclined to note reading and writing first.

F. Effective Thinking - This criterion does not seem discrete. It appears to overlap with B and D significantly. Moreover the "narrative expansion" could be clarified.

It might be spelled out even more explicitly and in greater detail. It is not clear to me what is meant by enhancing thinking effectiveness.

G. Creativity - This seems to me a great deal to ask. I would be more inclined to include creativity as one of the social issues in tier 2 or 3.

H. Pluralism - Here the emphasis shifts from the disciplines to the society. Is this preparation for Tiers 2 and 3? Isn't it also important to recognize pluralism in the disciplines?

The application section (p30-34) seems to me quite strong. I would think about reviewing the Tier 1 criteria one last time before applying them in Spring, 1982.

Finally, I will turn to the specific questions you asked.

1. "Will they indeed function as criteria, i.e. Will They discriminate general education from non-general education?

The proposed criteria will distinguish tier 1 courses from all other courses in the curriculum.

2. "Are the criteria comprehensive?"

I can't answer this question. I don't understand the objectives of Tier 1 well enough to know whether the criteria are comprehensive. The criteria may be too skimpy (unlikely); they may go too far (possible); they may be just right (also possible) As I noted earlier, the relationship between the purposes of Tier 1, the attributes for tier 1, and the criteria for tier 1, are for me hazy. I can only offer the not particularly illuminating observation that criteria can be called comprehensive only when they mirror the attributes and the attributes are a reflection of tier 1's purposes.

3. Do they seem to be consistent with general eduction theory as you know it?

Yes, the criteria sound a good deal like those traditionally associated with general education. The more important issue is whether the criteria are consistent with L.M.C.'s vision of general education. Sadly, most general education programs in place around the country, though using the same terminology as Los Medanos College, are badly blurred.

4. Are they central in significance to what general education should be?

The criteria emphasize pedagogy. I would be more inclined to concentrate on learning outcomes. There is always a danger when stressing particular pedagogic methods of confusing means (instructional approaches and course content) with ends (the learning outcomes and desired goals of a general education). For example, the criterions of an interdisciplinary approach may or may not be central in significance to general education. Most interdisciplinary courses that I see do a rather poor job of general education. The themes they explore are trivial, often more specialized than general and the quality of the courses is fequently low. More often than not most such classes end up being multidiciplinary rather than interdisciplinary. In contrast, the disciplines can be an excellent way to teach general education if they focus outward on the larger issues associated with general education. In short, what I am saying is that general education can be achieved by disciplinary, interdisciplinary and thematic methods of instruction. It all depends upon how these pedagogies are used. Again I can only say that the criteria are as central to general education as they are to achieving the objectives L.M.C. has set forth for general education.

5. Do they seem workable?

Yes, absolutely. They are clearly stated and specific.

I would conclude by saying that the Tier 1 project has made a very good start. My earlier comments may seem to belie such a judgment. They should not. I have simply tried to note the flaws and potential stumbling blocks of the working paper. This necessarily produces more negative than positive comment. In reality, I am excited and enormously optimistic about the project thus far. Keep up the good work.

If you have questions, please feel free to call.

Sincerely,

Arthur Levine

Arthur Levine
Senior Fellow

cc: Jerry Gaff

January 10, 1982

To: Chester Case
Program Director
Los Medanos College

From: Jeffrey D. Lukenbill Jeffrey Lukenbill

Subject: "A Position Paper: Tier I Criteria and Procedures for Application - DRAFT"

I have read with great interest and enjoyment the position paper and the supporting documents I received. I first became familiar with the work Los Medanos College had done in the area of general education in 1975 when I began a general education study at Miami-Dade Community College. At that time I found the program being developed at Los Medanos to be the most carefully thought out and the soundest program of any that I reviewed. It is good to see that Los Medanos continues its leadership in this area.

Essentially I have only praise for the work done in the past and for the current proposal for Tier I. Having read the position paper and the supporting papers several times, I am not sure that I will be contributing much to your effort, except to provide encouragement and moral support. I personally believe that a sound general education program is fundamental to the college curriculum and that past failures have not been the result of inherent weaknesses in the concept of a general education. During the 1980's community colleges in particular will have an excellent opportunity to bring new vitality to general education. and thereby do a great service to our students and to the community.

I appreciate the chance to review your program and your confidence in my ability to bring a worthwhile outside perspective to your efforts. Please don't hesitate to contact me if I need to clarify some comments or if you would like to pursue any comments further. Finally, I hope that my contribution has not been limited because of the fact that I share your philosophical position and generally support the purpose and goals of general education that Los Medanos has espoused.

Introductory Comments

As I have reviewed the draft position paper for Tier I and other supporting documents, I have found that I agree in essence with the approach Los Medanos is taking towards general education. I share the same views about the proper spirit of general education, the fundamental goals of general education, and the means necessary to achieve these goals.

First, let me say that I think that generally the criteria proposed are quite sound. I even admire Los Medanos for formally addressing some of them which raise some difficult issues. I have tried to review each of the proposed criteria in a critical manner to help you clarify your own thinking. As I raise questions and objections, however, please do not view these as an attack on your fundamental approach or on the criteria as a whole. They are excellent.

To answer specific questions posed to me:

1. the proposed criteria as a whole will function as criteria; that is, they will discriminate general education from non-general education;
2. the criteria are comprehensive; I can suggest no other criteria;
3. the proposed criteria are very consistent with the best presentations of general education theory that I have read;
4. they are central in significance to what general education should be (and usually isn't);
5. they should be workable (given a lot of work with and by faculty members).

At this time I have no specific recommendations for consultants for the next phase of your project. There are some standard names associated with creativity, interdisciplinary programs, etc., but my guess is that there are very few who have real experience in implementing the kind of program you are developing. At Miami-Dade we have worked very hard on developing new interdisciplinary courses, and for the most part we are learning from our own experience. If you are interested, I could possibly suggest some names of individuals from various colleges and universities who have worked with particular discipline areas. I just recently returned from a conference that had a substantial part of the program devoted to the place of values and ethics in general education and in education in general; let me assure you, there is still much groping about what should be done and how to do it. Moreover, most programs that are in place are relatively narrow, related to specific disciplines, and usually involve only a limited number of students. The same will be found, I am sure, for the other criterion areas you are proposing.

Before reacting specifically to the proposed criteria, I would like to raise two general considerations. I feel quite sure that these two areas have already been dealt with in other contexts or in other forums. Both of these involve complex issues, concerning which there is often much emotion and concern among faculty members. But I still feel that It is important to raise them and resolve them with relation to general education.

The first is the place of disciplinary courses in general education. I personally am a strong supporter of the place of the disciplines in education. They have been a primary mechanism for advancing and refining our knowledge. I am less certain about the place of discipline courses in general education. I think I read some ambivalence about this role in your proposal. You obviously have made a strong commitment to the disciplines by placing them in Tier I. On the other hand, your criteria and the characteristics of a good education that you mention make it clear that these disciplines cannot be taught in isolation; nor should they be taught as they have been in the past, as narrow, factual introductions that demand excessive memorization of detail. To be truthful, I really wonder if it will be possible to teach the discipline courses and meet all the criteria you have specified, and still have discipline courses. It seems to me you are suggesting a new kind of course, call it interdisciplinary if you want, that goes far beyond the traditional discipline course and far beyond what I suspect is the experience of most faculty. Let me emphasize, I am most supportive of that new course.

If faculty members have been sensitive to non-discipline courses, my comments may be upsetting. I have the fear, however, that the criteria specified will get only passing attention in the actual teaching of the courses, or that faculty will be frustrated in trying to cover a discipline and also give adequate attention to these criteria.

The second consideration I want to raise is the relationship between developmental education and the general education program, especially Tier I. I would assume that you find at Los Medanos,as we find at Miami-Dade and is found throughout the country, that the level of basic skills in students entering from high school and in older students returning to college is alarmingly low. At Miami-Dade, we view the situation in crisis terms. Approximately seventy percent of our students have a deficiency in at least one of the basic skills, reading, writing, and math. Our experience has been that we cannot deal effectively with the problem by simply assigning remediation to a separate department where some educational miracle is supposed to take place.

Miami-Dade has adopted a formal principle that all faculty members share in the responsibility for improving students' basic skills. Consequently, our new general education program is designed to support developmental programs and the improvement of these basic skills. Since I found no clear mention of the relationship between basic skills development and the general education program, I raise the issue here. Are students expected to have all of these skills at an acceptable level before enrolling in a Tier I course? While faculty are to provide reading and writing opportunities, will these activities and assignments build upon and support work that was done in developmental areas? There are other questions that could be asked, but as I said before, I am sure the issue has received attention.

The following pages contain specific reactions to the proposed criteria.

Tier I Criteria - in General (Draft Position Paper, Dec., 1981, p. 4)

Although I might agree that the attributes listed may be "inherent in all good education," I would question whether they are all to be found in all courses. It is precisely because general education is at the heart of all "good education" that one should expect to find these attributes in general education courses. Some math courses, technical courses, advanced skills courses, etc. would demonstrate these attributes, like contributing positively "to the way learners live their lives in work . . .," only through the personal behavior of the instructor, apart from the course content. In any case, these attributes seem to me to be especially characteristic of general education courses. Perhaps they are more properly the goals of general education, towards which all the courses should be directed.

With regard to your criteria, I would think that these attributes should be included, not simply as characteristics of all good courses (which I question), but as goals are attributes to be demonstrated in specific ways by the general education courses, including Tier I.

Preamble (pp 5-7)

I agree strongly with what you have termed "the spirit to general education pedagogy." I agree also with the statements about the substantive content of the discipline courses; they should have firm cognitive foundations. I sense a concern among some faculty that these courses not be structured so narrowly that faculty initiative is restricted. This is a proper concern. On the other hand, you should not undervalue this "spirit" of these courses.

The spirit of a program is both most essential and most elusive. I would think that over time attempts should be made to measure whether aspects of this spirit are in fact present and to identify approaches, teaching strategies, etc. that will help faculty members foster this spirit.

The faculty may not favor an objectives or a competency approach, but I do think there should be some agreement about what each of the Tier I courses is to achieve (your review process may do this, but I'm not sure just checking for the presence of the criteria will do so adequately); with this agreement, faculty members may understand then that they have both the right and the responsibility to achieve those ends in the most effective ways they can.

Applications of Criteria (pp 8-10)

This section is well-stated. The only element missing in the "Overview" is consideration of evidence after the course has been taught. I understand that you are dealing here with the initial designation of a course for Tier I, but I would think that part of the model would be some kind of "post-course" evaluation to corroborate the initial designation.

I have experienced the concern of faculty expressed in the "Caution" about the "displacement of the proper disciplinary content of the course." This is a genuine concern and not to be treated lightly. I also believe, however, that there is a great deal of misunderstanding about what is "proper content" and about what a disciplinary course should try to achieve.

While I agree that we must always be sympathetic to faculty concerns about the integrity of the disciplines, my experience and my discussions with those involved in general education programs at other institutions convince me that the real concern is not that the discipline courses will be professionally violated, but that the discipline hold is so strong that the characteristics of general education never surface. Thus, I would have some disagreement with the final statement (p. 10) that the "general education elements in many cases will be suitably introduced in the way the content is taught . . ." The phrase "in many cases" is apparently a disclaimer, but I would argue that for these courses to be truly general education there are implications for the course content itself--specifically with reference to the question of what is it that a generally educated person should know?

Tier I Criteria

A. Interdisciplinary

This is a most important, but most difficult criterion. I believe that it is essential for the general education program. You also give it a certain preeminence. On the other hand, it is clear that you have chosen not to make the Tier I courses interdisciplinary in themselves, whether for philosophical, educational or political reasons. My guess would be that political considerations, both internal (attitudes of faculty members) and external (perhaps articulation with four-year institutions), had a great influence.

You are correct in insisting that the courses have specific "content references to the commonalities and interrelatedness of the disciplinary family . . ." These criteria cannot be left to chance. Yet, I am somewhat skeptical about a strictly disciplinary courses, for example, economics, including "fundamental concepts, generalizations, principles, values, attitudes, and belief systems common to other disciplines in the given family." It is difficult to design a single course that would do nothing else but try to cover these fundamental concepts, etc., apart from any specific disciplinary content. Moreover, my experience has been that not many of us faculty members know how to do this very well. At the very least, I would feel almost certain that a great deal of faculty development and discussion among faculty members teaching courses in each of the broad areas would be essential.

In summary:

1) yes, "interdisciplinary" is a criterion of general education;
2) yes, it will help discriminate;
3) yes, it is central in significance;
4) I am not sure it is workable without much preparation and support;
5) I wonder if you are begging the issue here -- how well do you expect this criterion to be met in, for example, a chemistry course, or is the discipline chemistry course to be excluded from Tier I?

B. Modes of Inquiry

This criterion is also appropriate for general education. I would see some relationship with criterion A, "Interdisciplinary," since there generally will be similar modes of inquiry with perhaps some significant differences. Once again, this criterion will not be met by one statement or one class meeting, and I would wonder how much time faculty members could give to this criterion under the pressure of extensive disicpline content.

In summary:

1) yes, it is a criterion of general education, especially as compared and contrasted with other modes in other disciplines;
2) yes, it will help discriminate;
3) yes, it is very significant;
4) yes, it is workable, given adequate time and discussion.

C. Aesthetics of Knowledge

This is a more original criterion but more difficult to defend as a criterion. One difficulty is that it seems to be more clearly in the affective domain, and thus would be more difficult to measure. Another diffiulty it seems to me is that the aesthetics of learning and knowledge is more often associated with specialized knowledge where the subtlties and finer distinctions can be better understood and appreciated. While this criterion may well be a goal towards which instructors should work, it may be unrealistic to expect students to demonstrate such an aesthetic appreciation as a result of their general education courses.

In summary:

1) I am doubtful whether this is a criterion of general education;
2) I suspect that it does not discriminate well;
3) I don't think it is so central in significance;
4) it will be difficult to measure.

D. Implications of Knowledge

This criterion seems to attempt to embody a number of areas: value judgments, formation of values, application of knowledge, and generalization. All of these are worthwhile and proper to general education. Students should understand their values, make value judgments, apply their knowledge and be able to generalize. Perhaps it would be clearer if, under this heading "Implications of Knowledge," these were specified clearly and directly and not lumped together as if they had some natural association.

I am uncertain about the statement, "The knowledge of a given discipline will embody values . . ." The area of values and ethics is currently receiving a great deal of discussion. There is considerable debate about how to best bring students to understand their value systems and to lead them to make informed value judgments. I agree with the approach of including such consideration within the context of other study, and not simply as a philosophical consideration. My experience has been that faculty members are extremely sensitive to this notion of teaching students value systems, ranging from strong resistence to anything that would suggest that faculty members could impose their own values to strong support for clearly biased value positions on the grounds that values are always involved in the educational process and these values should be as explicit as possible.

In summary:

1) This criterion may, in fact, be three or four criteria, including ethical considerations, application of knowledge, and implications for the future;

2) the criterion, or criteria, should help discriminate;

3) the criterion is significant;

4) it is workable.

E. Reading and Writing in the Learning Process

These skills are unquestionably part of the general education process. My only recommendation would be to include other communication skills, especially speaking and listening. The illustrations you give are very important, since my experience on many occasions has been that many faculty members do not understand what kinds of writing examples are appropriate, the variety of assignments that can be given, or how to judge and critique student writing.

In summary:

1) this is an important criterion;

2) in itself, it may not discriminate, but given the emphasis for these courses, it should help to discriminate;

3) it is central in significance;

4) it is workable, but will probably require faculty development activities.

F. Effective Thinking

This criterion icludes several skills, all of which are important to general education. Critical thinking, problem solving and decision making are important learning skills. As you indicate, these are probably best taught through careful selection of teaching strategies that encourage students to use these skills. The typical lecture, memorization, objective test kind of course would ordinarily not develop these skills in students.

In summary:

1) it is an important criterion, although there may be three or more criteria;
2) it will help discriminate;
3) it is central in significance;
4) it is workable.

G. Creativity

As a specific criterion, this is difficult to define as you indicate. I would agree that it is worthwhile to encourage students to be creative and to develop teaching activities that will help nurture creativity. Creativity, however, will also be much more difficult to measure as a student outcome. It does seem that this criterion could be met more easily in the arts, as you illustrate. I think that what you are really getting at is that the teacher's methods should foster those skills and attitudes that usually encourage creativity, and this is commendable.

In summary:

1) this may be an important criterion, but it may be more affective than cognitive, and thus be more difficult to measure;
2) it may help to discriminate;
3) it is not so central in significance, but it is important;
4) I am not certain that it is workable, unless you view the criterion only in relation to an instructor's activity.

H. Pluralism

This is an important criterion. The only thing I might suggest for addition is that the content itself should support the objective of this criterion. Certainly in the areas of the social sciences and the humanities the selection of content can be critical, and either discourage or encourage a pluralistic attitude.

In summary:

1) this is an important criterion;

2) it will help to discriminate;

3) it is central in significance;

4) it is workable.

Summary of the Criteria

I had some difficulty working through the criteria because I felt some confusion between what a course should be and what effect it should have for students. At times I felt a criterion really was concerned with student outcomes -- what students should know or what skills they should have at the end of the course. I think a clearer distinction would be that the criteria for the general education courses should characterize what they are and that general education goals or objectives should specify what should characterize students who complete these courses. From this perspective, I would make the following chart:

What Characterizes a Tier I Course	What Characterizes Students Who Complete The Tier I Courses
A. Interdisciplinary content and approach	(Understand relationships among disciplines)
B. Modes of inquiry	(Understand various modes of inquiry)
C. (Taught so as to illustrate aesthetic features)	Appreciates aesthetic aspect of the discipline
D. Considers ethical issues	(Develops values and makes informed value judgments)
E. (Includes reading and writing activities)	Demonstrates ability to communicate effectively (in reading and writing) within the discipline area
F. (Includes activities demanding critical thinking, problem solving and decision making)	Demonstrates ability to think critically, solve problems and make decisions in the discipline area
G. (Includes examples of creativity and encourages creative responses)	Engages in creative activities and attempts creative responses and solutions in the discipline area
H. Is pluralistic in approach	(Understands and appreciates the strengths in diversity)

I would consider the items in each list without parentheses as most appropriate for that grouping. Thus, I would be inclined to reduce the criteria for the general education Tier I courses to only four:

1 - contains interdisciplinary content and approach

2 - introduces various modes of inquiry

3 - considers ethical issues

4 - is pluralistic in approach

The other criteria I would include in general education goals or objectives that would be a part of every general education course as appropriate. These goals and objectives would be considered in measuring the effect of the general education program on students.

This raises the question of discrimination. Even with a relatively specific definition of general education, general education goals and criteria for general education courses, there will be some fine decisions concerning whether a course should be included as general education. It would be unrealistic to expect these criteria or any criteria to make all decisions about your Tier I courses clear and unanimous. Another factor to be considered is what you have in mind for your program itself. To be specific, is your Tier I intended to be inclusive of many courses or to be restricted to a relatively few basic courses? How much choice do you intend for your students to have? How many curricular choices can you afford given the size of your student body, the backgrounds of your instructors, and the broad discipline areas to be covered?

Given some idea of the number of courses you would like to offer students in each of the six Tier I areas, I think the criteria you have identified are more than adequate for identifying these courses.

A second issue has to do with the success of the Tier I courses. I would guess that in many instances faculty members will have to revise the typical introductory discipline courses to meet these criteria so that they will be acceptable for Tier I. But this will be only the first step. Several of these criteria involve teaching methods and strategies and faculty attitudes towards learning. Even though Los Medanos faculty have obviously given much more thought and discussion to general education than most colleges, I would be very surprised if there were not still considerable concern about how to implement these criteria and how to achieve these general education goals. If you have not already done so, I would recommend faculty development activities concerning how to revise courses to meet the Tier I criteria and how to implement thses criteria with appropriate teaching strategies.

In conclusion, I have tried to be critical of the proposed criteria in order to help you refine your own thinking. I have raised a question about the nature of the disicipline courses themselves given all of these criteria and the expectations for these courses. I assume, however, that you have good reasons for retaining discipline courses, with interdisciplinary aspects, in Tier I. On the whole, the work you have done is excellent. The criteria demonstrate carefully thinking and what I would judge to be a solid understanding of what a general education should be. I think you would be on quite safe ground in proceeding with these eight criteria for identifying these courses. (Many institutions, however, would run the risk of being able to identify no courses for their general education.) Certainly, as you get experience with your program and have results from your courses, you will make necessary revisions and adjustments to your criteria.

GENERAL EDUCATION AT LOS MEDANOS COLLEGE
TIER ONE CRITERIA
A CRITIQUE BY TERRY O'BANION
VICE CHANCELLOR OF EDUCATIONAL AFFAIRS
DALLAS COUNTY COMMUNITY COLLEGE DISTRICT

1. Will the Tier One Criteria discriminate general education from non-general education courses?

Given the centrality and the value accorded general education at Los Medanos College would instructors in that institution let it be known that they teach a "non-general education" course? For example, in the criterion "Reading and Writing in the Learning Process" there is the suggestion that writing in its traditional role is simply an "evaluation instrument to measure student progress" and that reading is something the student does to memorize. (See page 20) When the traditional role is cast pejoratively then who will want to be traditional--or in this case "non-general education"?

Most instructors who teach "non-general education" courses will make a case that their courses meet these criteria: have a mode of inquiry, relate the implications of the knowledge they are teaching, teach reading and writing as a learning process, and encourage effective thinking and creativity. They might own that their courses are not necessarily interdisciplinary and that the aesthetics of knowledge and pluralism do not receive a great deal of attention.

Will the criteria discriminate? Try them out on some "non-general education" courses and see what happens. My guess is that they will discriminate in a general way. But perhaps not in ways that will prove satisfactory to you.

2. Are the criteria comprehensive?

Comprehensive related to what? The criteria seem to be a jumble of notions that in some way relate to the all-too-elusive "general education."

It is a jumble of process and product, of structure and outcomes and of specific value statements. I doubt it can be otherwise, but the jumble surely makes the task of the critics of general education much easier.

Earl McGrath once said that the personal development course was the bellwether of the general education movement. If that is true, more attention may need to be given to personal development although a cursory reading of the criteria appear to focus a great deal on personal development. I felt, however, that there was an antiseptic quality in the language and especially in the examples of how a criterion might be achieved. The examples spoke to life "out there" rather than to life "in here." Where do students really struggle with the great "self-issues"? The questions, Who am I?, Where am I going?, and What difference does it make anyhow? are the essential questions common to all human beings. Where in these basic courses and even in the "social issues" courses will these questions be addressed? In my view, they should be addressed as central rather than in an adjunctive way which is the feeling one gets in reading these criteria.

3. Are the criteria consistent with general education theory, and are they central in significance to what general education should be?

The criteria are consistent with general education to the extent a list of criteria can be consistent with a not-too-well-defined concept. This is not, of course, the fault of any committee at Los Medanos; general education has been difficult to define by all the groups who have attempted to define it over the past several decades.

The one problem I see in the consistency/significance question is that any one of the criterion could be a course in itself. In fact, the criterion on effective thinking lists the components of the basic general education course I took at the University of Florida in 1954 titled C41-Effective Thinking. That University of Florida program was a model general education program constructed at the University of Chicago in the late 40's and 50's and served as a model around the nation in the 50's decade. The last four criteria could all be complete courses that attempt to achieve some of the values of general education. I do not know if this is a problem or not, but it is an observation you may wish to fret about.

4. Do they seem workable?

On page 32 it is noted that "The GEC will apply the Tier One criteria to all courses proposed for Tier One and judge whether or not the criteria are satisfied to a degree reasonable and appropriate to the discipline of the course. The GEC will recognize that not all disciplines provide the opportunity for the equal satisfaction of the criteria."

If these criteria are to be "workable" perhaps you could spell out some definitions of "reasonable and appropriate." You may also want to consider requiring that a course must achieve at least six or seven of the criteria rather than all eight. You may further wish to consider requiring the applicants to spell out in some detail the extent to which their course achieves each of the criteria.

ADDITIONAL COMMENTS

This paper does a very good job of framing one of the continuing great flaws in general education. The sentence on page 5 sums up the problem: "If there is a distinctive general education curriculum, there is a distinctive general education pedagogy." Sydney French contrasts general education with liberal education when he says "The purpose of general education is to bend the subject matter to the student. The purpose of liberal education is to bend the student to the subject matter." He is suggesting that pedagogy may be more important or at least as important as content. And all of us general educationists believe that. The problem, however, is that we waver between pedagogy and content. We want to have it both ways because we know the value of both. And yet, when we try to implement pedagogy, it appears that we are doing a disservice to content.

I believe that is the basic problem in these criteria. When content is not obvious, pedagogy fills the breach. On page 10: "The general education element in many cases will be suitably introduced in the way the content is taught..." In the narrative section of many of the criteria there is often a reference to methodology or process as being the only way to achieve the general education goals. While it is important to recognize pedagogy this must be balanced with content. In Tier One you are talking about "discipline courses" and there must be in each of these courses "that education in that discipline (read content) that is common to the common man." I know that staff members at Los Medanos are aware of this problem, but in this first draft I think you may have gone a bit far in the direction of pedagogy at the expense of content.

COMMENTS ON SPECIFIC PAGES IN THE PAPER

Page 3 - In the first paragraph, what is meant by "genuine education character"? Perhaps in this first draft paper "general education character" is meant.

Page 4 - Is this section on page 4 necessary? What is gained by it? There is a rambling that begins on page 4 and extends through page 7. I would condense some of this.

Pages 4 - 7 - This is a further explication of the item just before. In these pages, there seems to be a rambling list of characteristics for these courses. For example, these courses or criteria should have "attributes that set high standards" and these attributes are all "learner centered" (page 4). "There is a distinctive general education pedagogy" (page 5). "There is a spirit to general education and pedagogy" (page 6). "A Tier One course ought to have certain general 'over all' attributes" (page 6). "In respect to how it is framed, a Tier One course ought to" (page 7.) What does all this mean: "attributes that set high standards, a general education pedagogy, a spirit to general education pedagogy, certain general, over-all attributes, and how it is framed?" This is all a bit confusing as if the writer started the motorcycle five times.

Page 7 - I do not understand what is meant by "impart to the learner a sense of being a participant in the dialogue of common learning." It sounds good, but what does it mean and how does it relate to the context of these other "general over-all attributes"?

Page 12 - If there are "shared attributes that are common to the various disciplines of social science" then I assume there is a common core of knowledge that is common to each discipline in the family of disciplines in social science. Therefore, it should be possible to list these "shared attributes" that should appear in each general education course submitted in the family of the disciplines in social science. What do you think?

Page 14 - Regarding the modes of inquiry of a given discipline, do disciplines in a family of disciplines have different modes of inquiry or are modes of inquiry also common across disciplines in the family just as those disciplines in a family have "shared attributes"? If modes of inquiry are also shared across a family of disciplines then this is another way to achieve the interdisciplinary perspective.

Page 20 - Why is the section on reading underlined?

Page 28 - It is said that "when learners take a Tier One course, they will have the opportunity to learn the basic knowledge of the discipline"; however, many of the criteria suggest satisfaction by process. Again I come back to the basic problem of balance between process and content.

In a review of the related documents to the position paper, I jotted down the components of the "substantive discipline courses." These were the components gleaned from this reading:

a. Introductory course to the discipline
b. Concepts and principles common to all related disciplines
c. Content related to companion course
d. Must bridge to societal issues
e. Brings ethnic, women's perspective to the course content.

That is a tall order for a course that must at the same time balance process and content.

SUMMARY STATEMENT

I have tried to be as critical as possible in a situation in which I have great admiration and respect for what you are trying to accomplish. I have been critical because I know staff members at Los Medanos are people with intellectual integrity who want an honest and frank response to their work, and I appreciate the opportunity to participate as an outside critic. As an outsider, my comments are shared with only limited knowledge of the activities and the products at Los Medanos; but I hope they will help in a case or two by providing fresh views or by raising an important question.

More than any other community college I have known, Los Medanos College has made the strongest commitment and has taken the most substantive and open approach to developing a sound general education program. You are a model for all of us in the community college, and please know how much I appreciate your good efforts. I wish you the very best and hope you will keep me informed about the continuing good work at Los Medanos College.

January 7, 1982

APPENDIX F

GENERAL EDUCATION TIER I COURSES AND COURSE OUTLINES

Behavioral Science

Behavioral Science 5LS:	General Anthropology	Gail Boucher
Behavioral Science 6LS:	Cultural Anthropology	Gail Boucher
Behavioral Science 10LS:	Functional Aspects of Psychology	Estelle Davi Thais Kishi Ofelia Marino
Behavioral Science 11LS:	General Psychology	Thelma Scott
Behavioral Science 15LS:	Introduction to Sociology	Alex Sample
Behavioral Science 16LS:	Introduction to Social Problems	Alex Sample

Biological Science

Biological Science 5LS:	Health Biology	Christine Meek
Biological Science 10LS:	General Biology	Jerry Davis
Biological Science 20LS:	Principles of Biology	Jerry Davis
Biological Science 25LS:	Ecology	Christine Meek

Physical Science

Physical Science 5LS:	Physical Science	Ed Rocks
Physical Science 15LS:	Introduction to Physics	Ed Rocks
Physical Science 20LS:	Introduction to Chemistry	Angel Juarez Mitch Schweickert
Physical Science 25LS:	General College Chemistry	Angel Juarez Mitch Schweikert
Physical Science 35LS:	General College Physics	Dave Nakaji
Physical Science 45LS:	Introduction to Astronomy	Kate Brooks

Humanistic Studies

Art 5LS:	Humanities: Visual Art	Larry Howard Jean Shrader Stan Smith

Humanistic Studies (Continued)

Music 10LS:	Music Literature	Jean Shrader Stan Smith Larry Howard
Humanistic Studies 40LS:	Philosophies of the World	Connie Missimer
Humanistic Studies 41LS:	Critical Perspectives	Connie Missimer

Language Arts

Language Arts 30LS:	The Nature of Literature	Ross MacDonald
Language Arts 35LS:	Mass Communication	Richard Livingston

Social Science

Social Science 10LS:	An Economic View of Society	Robert Marshall
Social Science 21 LS:	Geography	Robert Marshall
Social Science 32LS:	United States History	Chester Case

APPENDIX G

LOS MEDANOS COLLEGE

COURSE OUTLINE FORMAT AND INSTRUCTIONS FOR TIER I GENERAL EDUCATION COURSES

INTRODUCTION

A course outline for a Tier I course will have to convey more information than the usual course outline. To meet this need, and to make the task of preparing a Tier I course outline more systematic, and, hopefully, easier, this special course outline format has been devised. This course outline format should enable a reader to see readily where and how Tier I criteria are satisfied, as well as give a good picture of the character of the course, what it covers, what it postulates as learner outcomes, how it is organized and how it is to be taught.

Since the General Education Committee must review and recommend course outlines proposed for Tier I, it is important that ways in which criteria are to be satisfied are clearly visible and unambiguous. This visibility will make the work of the Committee more efficient. It will also help the Committee make fair and objective recommendations.

This Tier I course outline has essentially the same components as the standard Los Medanos College course outline format, only components have been rearranged and some have been given added emphasis. Goals and objectives that relate to the Tier I criteria, for instance, are given a strong emphasis and ask for fairly detailed information. This course outline asks for an overview and rationale, but with a different emphasis. The overview is similar. It asks for a brief synopsis of the course. But the rationale asks for a discussion of the general education and Tier I attributes of the course. In effect, the rationale tells why the proposed course should be a general education course.

Another difference between the standard course outline format and the Tier I course outline format is of a mechanical nature, and should make the course outline both easier to do and easier to review. This course outline will be completed on standardized forms. These forms are intended to give the author of a course outline clear guidance as to what is expected, and at the same time to provide pointed and concise information to the reviewers of the course outline.

Here are the components of the Tier I course outline. (Instructions will follow).

1. Catalog description
2. Overview and Rationale
3. Goals and Objectives
    - 3.1 Course content goals
    - 3.2 Criteria related goals
    - 3.3 Other goals
4. Texts and Other Materials
5. Evaluation and Grading Plan
6. Course Policies

INSTRUCTIONS

1. Catalog Description. The catalog description should include the following:

    1.1 Course title and number

    1.2 Unit value

    1.3 Mode of instruction

    1.4 Brief description of the course

    1.5 Articulation statement

    1.6 Prerequisites

    See page 1, course outline format, for the catalog description form.

2. Overview and Rationale. The overview and rationale tell about the course and how it ties in to Tier I and the general education program. This section of the course outline should orient a reader to what the course covers and what argues for its inclusion in Tier I. It also tells what other disciplines are in the course's intra-disciplinary family.

The overview is a narrative description of the course. It should inform a reader of what are the major goals of the course, objectives, and content. Organization of the course, instructional procedures, policy or materials should be mentioned if they have special importance for the course. It is not necessary to enumerate the Tier I criteria in the narrative overview. The rationale should tell why this course is offered as a Tier I general education course. Attributes of the discipline that make it appropriate as a general education course should be mentioned. See page 2 of the course outline format for the Overview and Narrative form.

3. Goals. First, a definition: a goal tells what the course intends to do. (This is in contrast to an objective, which tells what a learner should know, be able to do, experience or feel as a result of taking a course). To simplify the course outline, goals will be set out in three categories.

3.1 Content goal: each course outline will have in it a standard goal statement related to the content of the course. This statement is:

The intent of this course is to introduce the following course content to the learner.

Following this goal statement, a topical outline of the course will show the intended course content. Objectives need not be stated here. See pages 3-4 of the course outline format for the Topical Course Outline form.

3.2 Criteria related goals: for each of the eight criteria, a form will be provided. See pages 5-12 of the course outline format. (If the space on one page proves to be insufficient, duplicate the necessary form and add to the course outline.) Each criteria is phrased as a generalized goal statement. From this general criteria related goal, sub-goals appropriate to the given discipline should be derived.

The form for each criteria is divided into columns. Information will be put into these columns to show how the criteria are to be satisfied. These columns are:

3.2.1 sub-goals - sub-goals relate back to the criterion and tell what the course intends to do to satisfy the given criterion, as appropriate to the content and processes of given discipline.

3.2.2 objectives - in this column, objectives that connect to sub-goals should be given. Objectives describe what the learner should be able to do, to know, to experience or feel, as the result of taking the course. An objective describes a learner outcome. Objectives, or learner outcomes, can be stated in terms of:

> cognitive domain, i.e., knowledge, fact, theory, concept, generalization
>
> affective domain, i.e., ethics, values, attitudes, beliefs, feelings, experience
>
> skills domain, i.e., operations, performances, manipulations

3.2.3 The content of the course will have been shown in the topical outline. Use the outline numbering system for references to show in this column the content that is used in connection with a given sub-goal and objective.

3.2.4 Instructional procedures/materials - if instructional procedures (i.e., teaching methods, strategies, pedagogy) or materials of instruction are means by which a criterion is to be satisfied, they should be indicated (briefly) next to the pertinent goal and objective, and perhaps, the content.

3.2.5 If the course outline is to include some aspect of teaching/learning that cannot be placed in the columns provided, make note on the bottom of the form and explain.

3.3 Other goals and objectives: If a course outline has goals and objectives other than those covered in the course content goal and the criteria related goals and objectives, use the Other Goals and Objectives form. See page 13.

4. Texts and Other Instructional Materials. Give the relevant information on required and recommended texts in this section. Tell what other instructional materials will be used, but describe them by type and character. Do not give specific titles of video recordings, for instance, unless they are an integral, on-going component of the course. It is assumed that titles will change as materials are updated. See page 14.

5. Evaluation Plan and Grading Plan. This component has two parts, a description of how the learner's work will be evaluated, and in a general way, how grades will be calculated. See page 15.

6. Course Policies. In this component, course policies should be stated, such as policies related to attendance, fees, materials, expectations such as field trips, practicum, projects.

COURSE OUTLINE
TIER I GENERAL EDUCATION COURSE

Course Title: ________________________________

____

Course Author(s): ________________________________

____

1. Catalog Description

Title of course:

Course number:

Unit Value:

Mode of instruction:

Brief description of the Course:

Articulation statement:

2. Overview and Rationale

Overview

Rationale

3.1 Course Content Goal

The intent of this course is to introduce the following course content to the learner.

(Please give a topical outline of the course in detail sufficient to give the reader a clear idea of the topics to be taken up. Use a consistent numbering system.)

3.2 Criteria Related Goals: Criterion: Intradisciplinary

Criterion stated in goal form: To teach the intradisciplinary elements of the intradisciplinary family of courses.

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials

OTHER:

3.2 **Criteria Related Goals: Criterion:** Modes of Inquiry

Criterion stated in goal form: To teach the mode(s) of inquiry indigenous to the discipline.

SUB-GOALS (What the course intends) to do.	**OBJECTIVES** (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	**CONTENT** (Refer to Course Outline)	**INSTRUCTIONAL** Procedures/Materials

OTHER:

3.2 Criteria Related Goals: Criterion: Aesthetics of Knowledge

Criterion stated in goal form: To teach about the aesthetic qualities of the knowledge of the discipline.

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials

OTHER:

3.2 Criteria Related Goals: Criterion: Implications of Knowledge

Criterion stated in goal form: To explore these implications of the knowledge of the discipline: values, ethics and future.

SUB-GOALS (What the course intends) to do.	**OBJECTIVES** (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	**CONTENT** (Refer to Course Outline)	**INSTRUCTIONAL** Procedures/Materials

OTHER:

3.2 Criteria Related Goals: Criterion: Reading and Writing in the Learning Process

Criterion stated in goal form: To provide opportunities for learners to develop higher cognitive skills through reading and writing.

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials

OTHER:

3.2 Criteria Related Goals: Criterion: Critical and Effective Thinking

Criterion stated in goal form: To provide opportunities for learners to enhance their effectiveness in thinking.

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials

OTHER:

3.2 Criteria Related Goals: Criterion: Creativity

Criterion stated in goal form: To introduce to learners creative processes and examples of human creativity.

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials

OTHER:

3.2 **Criteria Related Goals:** Criterion: Pluralism

Criterion stated in goal form: To encourage the learner to consider the variety of perspectives, experiences and persuasions that have an impact on society.

SUB-GOALS (What the course intends) to do.	**OBJECTIVES** (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	**CONTENT** (Refer to Course Outline)	**INSTRUCTIONAL** Procedures/ Materials

OTHER:

3.3 Other Goals and Objectives

GOALS	OBJECTIVES

4. Texts and Other Instructional Materials

Required Text(s):

Recommended Text(s):

Other instructional materials:

5. Evaluation Plan and Grading Plan

Evaluation Plan

Grading Plan

6. Course Policies

State course policies, such as attendance, fees, materials, expectations regarding such activities as field trips, practicum, projects, and the like.

APPENDIX H

ROSTER OF MEMBERS OF THE GENERAL EDUCATION COMMITTEE

SPRING 1982

FALL 1982 - SPRING 1983

ROSTER OF MEMBERS OF THE GENERAL EDUCATION COMMITTEE

SPRING 1982

Judy Bank	Faculty; Language Arts, Reading
Sandy Booher	Dean, Language Arts and Humanistic Studies
Gail Boucher	Faculty; Anthropology, Counselling
Chester Case	Committee Chairperson: Faculty; Social Science and Humanistic Studies
Stanley Chin	Dean, Physical and Biological Sciences
Vincent Custodio	Dean, Behavioral Sciences and Counselling
Jerry Davis	Faculty; Biological Sciences
Richard Livingston	Faculty; Journalism, Humanistic Studies
Robert Marshall	Faculty; Economics, Geography
Andres Ochoa	Faculty; Welding
Gilbert Rodriquez	Faculty; Mathematics
Carlton Williams	Dean, Social and Economic Sciences
Robert Zavala	Faculty; Child Development

ROSTER OF MEMBERS OF THE GENERAL EDUCATION COMMITTEE

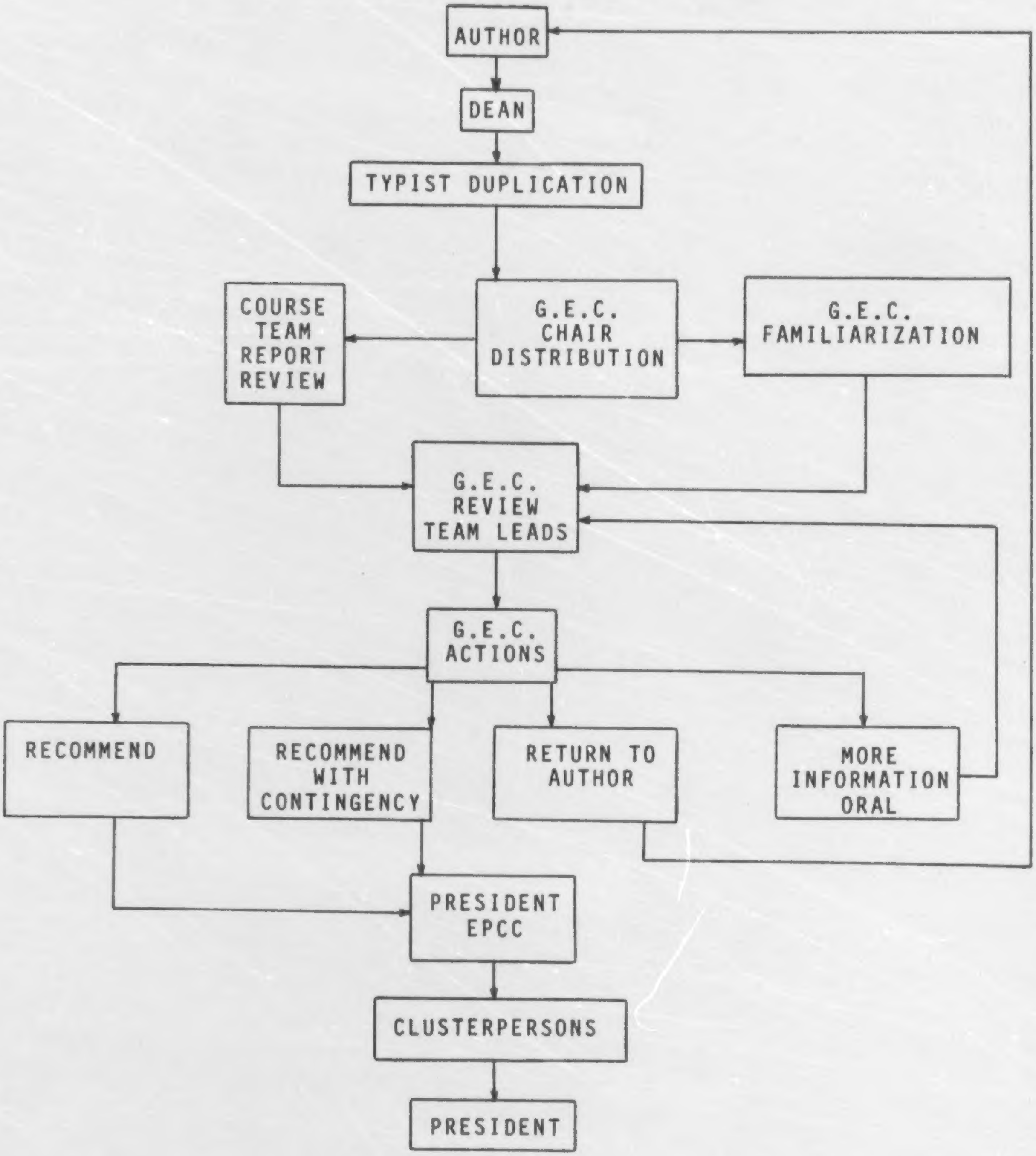
FALL-SPRING 1982-1983

Sandy Booher	Dean, Language Arts and Humanistic Studies
Chester Case	Committee Chairperson: Project Director, Faculty, Social Science and Humanistic Studies
Stan Chin	Dean, **Behavioral** Sciences and Counselling
Ross MacDonald	Faculty, Language Arts
Barbara Mahler	Faculty, Business and Computer Science
Ofelia Marino	Faculty, Behavioral Science and Counselling
Carmen Rodriquez	Faculty, Foreign Languages and Social Sciences
Gilbert Rodriquez	Faculty, Sciences, Mathematics
Mitch Schweickert	Faculty, Chemistry
Jean Shrader	Faculty, Music
Carlton Williams	Dean, Social and Economic Sciences
Robert Zavola	Faculty, Childhood Development and Behavioral Science

APPENDIX I

FLOW CHART OF REVIEW AND RECOMMENDATION PROCESS AND GENERAL EDUCATION COURSE OUTLINE REVIEW REPORT

FLOW CHART
TIER I COURSE REVIEW AND RECOMMENDATIONS


AUTHOR
DEAN
TYPIST DUPLICATION
COURSE TEAM REPORT REVIEW
G.E.C. CHAIR DISTRIBUTION
G.E.C. FAMILIARIZATION
G.E.C. REVIEW TEAM LEADS
G.E.C. ACTIONS
RECOMMEND
RECOMMEND WITH CONTINGENCY
RETURN TO AUTHOR
MORE INFORMATION ORAL
PRESIDENT EPCC
CLUSTERPERSONS
PRESIDENT

jes7182fc

GENERAL EDUCATION COURSE OUTLINE REVIEW REPORT

Title and number of course: ________________________________

Area: ____________________ Area Dean: ____________________

_____ new or substantially revised course requiring clusterperson review

_____ revised course not requiring clusterperson review (Spring, 1982)

1. Committee Action:

   _____ recommend for approval

   _____ recommend for approval contingent upon the following (specify contingencies and due dates):

   ____

   ____

   ____

   ____

   _____ return to author (explain):

   ____

   ____

   ____

____________________ ____________________

Date

General Education Committee Chair, for the committee

2. Comments: ____

____

____

____

Copies to: Author
Area Dean
President
General Education Committee
Karl Drexel
Charles Collins

jes7782geo

APPENDIX J

MINUTES AND REPORT FROM THE GENERAL EDUCATION COMMITTEE

MAY 4-5, 1982 AND MAY 19, 1982

May 12, 1982

To: Los Medanos College Clusterpersons

From: Chester Case, Chair, General Education Committee

Subject: Minutes and Report, General Education Committee

The General Education Committee met on Tuesday and Wednesday, May 4-5, to review course outlines of courses proposed for designation as General Education courses for Tier I. This is a report on the actions of the Committee.

1. Meetings were held as follows:

   1.1 Tuesday, May 4, 1982, St. Mary's College, 8:30 a.m. - 4:30 p.m. Present were: Booher, Case, Boucher, Bank, Davi, Custodio, Chin, Marshall, Ochoa, Rodriquez, Zavala, Williams.

   1.2 Wednesday, May 5, 1982, Los Medanos College, Room 409, 9:00 a.m. - 12.45 p.m. Present were: Bank, Booher, Case, Chin, Custodio, Davi, Marshall, Ochoa, Rodriquez, Williams, Zavala

   1.3 At all times a quorum was present.

2. Procedure

   Procedure set out in the position paper was implemented. The Committee first reviewed the task at hand, which was to review the submitted course outlines (25) for satisfaction of the Tier I general education criteria. A sequence of activities was decided upon. Course outlines were taken one at a time for review. Course teams (see Attachment A) led discussion on a course outline and its satisfaction of the criteria. Course outlines were assigned to categories, depending upon the degree to which criteria were satisfied. Conditions specified for further development and/or revision were discussed and noted for course outlines. The Committee voted on recommendations, and discussed next steps for the project.

3. Committee Actions

   The Committee acted on the following motions:

   MSC: That the General Education Committee recommend as general education courses these courses, subject to completion of specified minor adjustments:

Art 5 Humanities: Visual Art
Music 10 Humanities: Music
Physical Sci 20: Introduction to CHemistry
Physical Sci 45: Introduction to Astronomy
Behavioral Sci 5: General Anthropology
Behavioral Sci 6: Cultural Anthropology

Yes 9 No 0 Abstain 0

MSC: That the General Education Committee recommend as General Education courses these courses, subject to completion of specified revisions:

Social Sci 10: An Economic View of Society
Social Sci 32: United States History
Language Arts 35: Mass Communication
Humanistic Studies 40: Philosophers of the World
Biological Sci 10; General Biology

Yes 9 No 0 Abstain 0

MSC: That the General Education Committee recommend the following courses be conditionally accepted as General Education courses for the 1982-1983 Academic Year only. Specified major revisions must be completed during Fall, 1982, for the courses to be designated as General Education courses.

Biological Sci 5: Health Biology
Biological Sci 20: Principles of Biology
Biological Sci 25: Ecology
Physical Sci 5: Physical Science
Physical Sci 15: Introduction to Physics
Physical Sci 25: General College Chemistry
Language Arts 30: The Nature of Literature
Social Science 5: American Institutions and Ideals
Behavioral Sci 10: Psychology: Functional Aspects
Behavioral Sci 11: General Psychology
Behavioral Sci 15: Introduction to Sociology
Behavioral Sci 16: Introduction to Social Problems

Yes 8 No 0 Abstain 1

MSC: That the proposed new courses "Black Diamond; A Study of Geographical Concepts" and "Critical Perspectives" be returned to their authors for revision and resubmission to the General Education Committee.

Yes 8 No 0 Abstain 0

4. Discussion

Faced with the realization that a large proportion of the proposed courses need revision and/or further development, some serious, and that the end of the semester is near, the Committee considered ways to provide the time, process and support necessary for effective revision. The Committee kept in mind the paramount goal of the Tier One Project, which is to have in place by Spring, 1983, an array of well-designed, effective Tier I courses that truly satisfy the criteria. The Committee also recognized that Phase III, yet to come in Fall, 1982, is by the plan of the grant to be a time to teach, evaluate and further revise Tier I courses. At this time, there will be excellent opportunities to undertake curriculum development activities.

After consideration of several options, the Committee decided to:

4.1 To hold the final review for permanent designation of courses as General Education until late Fall, 1982, when Phase III has been in operation and authors have had opportunity to make minor and/or major revisions and development.

4.2 To sort the course outlines into three categories according to the degree of revision and/or development needed to satisfy the criteria. These groups are:

I. Those that satisfy the criteria, or very close; capture the "vision" of General Education and integrate the criteria; minor adjustments necessary only.

II. Those that are close to satisfying and integrating the criteria; revisions and/or further development necessary, some of it of a major nature.

III. Those that are clearly in the right direction in satisfying and integrating the criteria, but which need major revision and/or development.

4.3 To conditionally recommend as General Education courses, the courses listed in the motions above, subject to completing revisions and/or development.

4.4 To see that feedback will be provided to authors. Authors are urged to confer with members of their course teams for discussion of the Committee's recommendations and conditions.

4.5 To emphasize the on-going process of course development and to stress the necessity of curriculum development activities in Fall, 1982.

5. Next Meeting

The next meeting of the General Education Committee will be on Wednesday, May 19, 1982, 12:00 - 1:00 p.m. in Room 409.

LOS
MEDANOS
COLLEGE

JOHN I. CARHART
President

2700 East Leland Road
Pittsburg, California 94565
Phone (415) 439-2181
(From Concord area 798-3500)

20 May 1982

TO: LMC Clusterpersons

FROM: Chet Case, Chair, General Education Committee

RE: Report and Minutes of Meeting, May 19, 1982

The General Education Committee met on Wednesday, May 19, 1982 in Room 409 from 12:05 to 1:45 p.m. Those present were:

S. Booher, C. Case, S. Chin, V. Custodio, C. Williams, B. Marshall, D. Livingston, G. Rodriguez, and J. Maltester

Guest: Connie Missimer

At all times a quorum was present.

Business

1. Update on course review process:
    - 1.1 Reports to course authors have been prepared and distributed. The reports contain general comments, the committee's recommendation, and specific conditions (see attachment for General Comments).
    - 1.2 Report and minutes of previous meeting were acknowledged.
2. Course Review
    - 2.1 MSC: That the General Education Committee reccommend Social Science 21, Geography, as a general education course in Category I.

      Yes 9 No 0 Abstain 0
    - 2.2 MSC: That the General Education Committee reccomend Humanistic Studies 40, Philosophers of the World, as a general education course in Category I.

      Yes 9 No 0 Abstain 0

CONTRA COSTA COMMUNITY COLLEGE DISTRICT

2.3 MSC: That the General Education Committee reccommend Humanistic Studies 41, Critical Perspectives, as a general education course in Category I.

Yes 9 No 0 Abstain 0

2.4 MSC: That because of extenuating circumstances, the General Education Committee consider Physical Science 35, General College Physics, although late in its submission for review, for approval as a Tier 1 general education course.

Yes 7 No 0 Abstain 0

2.5 MSC: That the General Education Committee reccommend Physical Sciences 35, General College Physics, as a general education course in Category I.

Yes 7 No 0 Abstain 0

3. Discussion of Further TOP Activities

3.1 June workshop: It was recommended that course authors be invited to participate in a day long workshop, for compensation, on Wednesday, June 16, 1982, on the LMC campus. The program would consist of a practical workshop session on critical and effective thinking (definitions, instructional strategies, materials) conducted by Connie Missimer, and a general session of the General Education Committee and course authors in which the criteria and format will be discussed.

3.2 Summer Contracts: Course authors may work on Tier I courses during the summer for compensation, upon a written agreement with the appropriate dean, as to:

3.2.1 What is to be done
3.2.2 How it is to be done
3.2.3 By when it is to be done

Appropriate work might be any or all of these:

3.2.4. Location and preparation of instructional materials
3.2.5 Preparing reading lists
3.2.6 Development of labs, exercises, instructional procedures
3.2.7 Research in course content
3.2.8 Works on conditions specified by the General Education Committee.
3.2.9 Other appropriate and relevant work on a general education course

3.3 Pre-School Session: It was recommended that there be a day long session, for compensation, for general education course instructors on Tuesday, August 31, 1982 to plan and discuss Phase III of the Tier One Project. Specifics to be planned.

4. The need for the General Education Committee to critique the criteria, the position paper and course outline format in the Fall was noted.

5. Meeting adjourned at 1:45 with next meeting not set.

APPENDIX K

CALENDAR OF TIER I CURRICULUM WORKSHOPS

NOTES, SEPTEMBER 21, 1982, "WRITING IN THE LEARNING PROCESS"

OCTOBER 12, 1982, "PLURALISM"

TIER I PROJECT: PHASE THREE

FALL 1982

Calendar of Tier I Curriculum Workshops

Sept. 21	Planning and Organization: Evaluation Strategies
Sept. 28	Writing in the Learning Process: Ross MacDonald
Oct. 5	Reading in the Learning Process
Oct. 12	Pluralism
Oct. 19	Creativity
Oct. 26	Effective Thinking
Nov. 2	Implications of Knowledge
Nov. 9	Aesthetics of Knowledge
Nov. 16	Intradisciplinary
Nov. 23	Modes of Inquiry
Nov. 30	Overview and Rationale
Dec. 7	Problem Solving in Course Outlines
Dec. 14	Open

NOTES

TIER ONE CURRICULUM WORKSHOP

September 29, 1982

Writing in the Learning Process: Ross MacDonald

(Notes taken by Charles Collins, edited by Chet Case)

1. Topic to be "Writing in the Learning Process." It will be an extension of the session Ross led before school opened. Next week, Judy Bank will lead the workshop on the other part of the criteria, "Reading in the Learning Process."

2. Workshop began with Ross's instructions that we "fill the page" in a writing exercise on a question on our student's writing skills...what do they do well and what do they not do well. After writing, small groups were formed to discuss the ideas, find commonalities, and prepare to report group findings back to the workshop.

3. The workshop is aimed at the three major steps in writing, thinking, or generating ideas, organizing, polishing. The ensuing discussion touched on the following points:

   3.1. A first step for the student is to understand the question
   3.2. Need to think out ideas
   3.3. Sorting out ideas
   Comment; thinking skills may be ahead of writing skills. On the other hand, writing exercises do force a student to try to think things through. For example, our writing exercises this afternoon forced us to think about the writing problems of students.
   3.4. Data gathering
   This has to come before organizing step
   Ross says; thinking and writing are reciprocal processes. Writing will
   ...stimulate new thought
   ...report what we know
   ...help find new relationships
   ...help develop structures to hold and relate information
   3.5. Ross recommended that instructors ask students to use "free writing" to get down just what they know (data gathering). Could use this at beginning of a unit of work. Will help students collect their own thoughts and see what they know and do not know.
   Students can share their information and ideas, as we did just now in the seminar. Read to each other.
   3.6. Motivation when writing for your peers is built in. Students want to look good in the eyes of their fellow students. If they are obliged to read what they have written, there is an incentive to do well. This also helps refine the sense of audience.

4. In the data gathering stage, Ross advises student to forget about spelling, punctuation and grammar. The idea is to get them to generate ideas, to collect data, to "brainstorm," Stan Chin comments this would be helpful in sciences because students think that in science there is just one answer, that they are reluctant to do free-wheeling brainstorming. Students must pay attention to spelling, etc., when writing up the finished, polished product.

5. Myths on what the instructor is supposed to do when reading student papers were shown on transparencies then discussed

6. Discussion: can classes other than English afford to invest so much time in writing without shortchanging the subject matter? Ross showed some less time-consuming approaches...for instance, cutting down on the group interaction and peer reading. Several examples from other classes were given. The problem is a real one. Ross pointed out that the writing is always to be tied in directly with the content of the course so the time is not really "lost." Content is used in the exercises so both goals - writing and content - are served.

7. The question was raised about strategies for other stages of the writing process, since the workshop dealt mainly with the initial stages of data gathering and generating ideas. **Question**: what are techniques for subsequent stages of focusing the topic, organizing and polishing the work?

   Ross asked us to write down techniques we use in our classes for these subsequent stages. He will collate and organize them for distribution.

Follow-up:

1. Ross will distribute a handout used in tutor training that he developed to give operational "instructions" to students. It gives definitions of what it means to "compare", or "contrast" or "discuss" or "evaluate," and so on.

2. Chet will reproduce and distribute a piece by William Perry on stages in thinking of students as they move from the absolutist, right-wrong posture to relativism. This article will bear directly on one of the most fundamental and important ideas that Ross was conveying, that the learner makes meaning of the material of the class, and that writing (like reading) is a powerful and versatile tool to help the learner make meanings. Generating ideas, organizing, composing, polishing and presenting is a powerful sequence for making meaning.

3. Chet would like to have central examples of the reading/writing criteria page in the Tier One course outline that show how the course outline has worked out the progression from a.) goal to b.) sub goal to c.) learner outcome to d.) content to e.) instructional procedures.

Stage	A) Metaphysical Assumptions	B) Epistemological Assumptions	Concepts of Justification
5	An objective understanding of reality is not possible since objective knowledge does not exist. Reality exists only subjectively and what is known of reality reflects a strictly personal knowledge. Since objective reality does not exist, an objective understanding of reality is not possible.	Knowledge is subjective. Knowledge claims are limited to subjective interpretations from a particular perspective based on the rules of inquiry and of evaluation compatible with that perspective.	Beliefs are justified with appropriate decision rules for a particular perspective or context, e.g., that a simpler scientific theory is better than a complex one.
6	An objective understanding of reality is not possible since our knowledge of reality is subject to our own perceptions and interpretations. However, some judgments about reality may be evaluated as more rational or based on stronger evidence than other judgments.	Objective knowledge is not possible to attain because our knowledge is based on subjective perceptions and interpretations. Knowledge claims can be constructed through generalized principles of inquiry and by abstracting common elements across different perspectives. The knower must play an active role in the construction of such claims.	Beliefs are justified for a particular issue by using generalized rules of evidence and inquiry. However, since our understanding of reality is subjective, any such justification is limited to a particular case, time or issue.
7	There is an objective reality against which ideas and assumptions must ultimately be tested. Despite the fact that our knowledge of reality is subject to our own perceptions and interpretations, it is nevertheless possible, through the process of critical inquiry and evaluation, to determine that some judgments about that reality are more correct than other judgments.	Objective knowledge is possible to attain. Knowledge is the outcome of the process of reasonable inquiry. The process of inquiry, however, may not always lead to correct claims about the nature of reality since the process itself is fallible. Knowledge statements must be evaluated as more or less likely approximations to reality and must be open to the scrutiny and criticisms of other rational people.	Beliefs reflect solutions that can be justified as most reasonable using **general** rules or inquiry or evaluation. Criteria for evaluation may vary from domain to domain (e.g., religion, literature, science), but the assumption that ideas, beliefs, etc., may be judged as better or worse approximations to reality remain constant.

Kitchener, K.S. & King, P.M. - from Reflective Judgment: Concepts of Justification and Their Relationshipt to Age and Education. J of Applied Development Psychology, 1981

TABLE 1

THE DEVELOPMENT OF REFLECTIVE JUDGMENT

Stage	A) Metaphysical Assumptions	B) Epistemological Assumptions	Concepts of Justification
1	There is an objective reality which exists as the individual sees it. Reality and knowledge about reality are idential and known absolutely through the individual's perceptions.	Knowledge exists absolutely. One's own views and those of authorities are assumed to correspond to each other and to absolute knowledge. Knowledge is gained through the individual's perceptions and prior teaching.	Beliefs simply exist; they are not derived and need not be explained. Differences in opinion are not perceived, and justification is therefore unnecessary.
2	There is objective reality which is knowable and known by someone.	Absolute knowledge exists, but it may not be immediately available to the individual. It is, however, available to legitimate authorities.	Beliefs either exist or are based on the absolute knowledge of a legitimate authority.
3	There is an objective reality, but it cannot always be immediately known, evento legitimate authorities. It is possible to attain knowledge about this reality, but our full knowledge of it is as yet incomplete and therefore uncertain.	Absolute knowledge exists in some areas, but in others it is uncertain, at least temporarily. Even authorities may not have certain knowledge, and therefore cannot always be depended upon as sources of knowledge. Knowledge is manifest in evidence which is understood in a concrete, quantitative way such that a large accumulation of evidence will lead to absolute truth.	Beliefs either exist or are based on an accumulation of evidence that leads to absolute knowledge. When such evidence is not available, individuals claim that while waiting for absolute knowledge to become available, people can temporarily believe whatever they choose to believe.
4	There is an objective reality, but it can never be known without uncertainty. Neither authorities, time or money nor a quantity of evidence can be relied upon to ultimately lead to absolute knowledge.	Absolute knowledge is for practical reasons impossible to attain, and is therefore always uncertain. There are many possible answers to every question, but without certainty and a way to adjudicate between answers, there is no way to decide which one is correct, or even whether one is better than another. Knowledge is idiosyncratic to the individual.	Beliefs are justified with idiosyncratic knowledge claims and on idiosyncratic evaluations of data ("What is true is true for me, but not necessarily for anyone else"). The individual is the ultimate source and judge of his or her own truth.

October 18, 1982

TO: Course Authors, General Education Committee, Deans
FROM: Chet Case Chet
SUBJECT: "Notes" and Next Meeting

Attached are "Notes" for the session on Pluralism. A lot of good ideas were discussed. I am interested in seeing how they might be finding their way onto course outlines. If anyone has the "Pluralism" page from their course outline done the way they want it, showing the sub-goals, learner outcomes, and linkages of content and instructional methods, the group would benefit by seeing it.

Next Meeting:

Topic: Effective Thinking; Gil Rodriquez, Chet Case
Day/Date: Tuesday, October 26, 1982
Time: 2:30 - 4:30
Place: 214

(Intuition is one aspect of effective thinking. Do the quiz below and come to the workshop to see how intuitive you are.)

HOW INTUITIVE ARE YOU?

This quiz will give you a measure of your level of intuitive ability. Mark your answers as honestly as possible.

True False

☐ ☐ 1. I feel that a logical, step-by-step method is best for solving problems.

☐ ☐ 2. Good hunches have provided the impetus for many successful projects.

☐ ☐ 3. I sometimes act on a hunch out of curiosity.

☐ ☐ 4. In order for me to act upon a decision, it has to "feel right."

☐ ☐ 5. Intuitive hunches are unreliable guides for action.

☐ ☐ 6. I feel that many of my ideas seem to grow out of their own roots, as if they were independent of my will.

☐ ☐ 7. I have very little interest in problems that do not have clear-cut and unambiguous answers.

☐ ☐ 8. I have the ability to penetrate to the essence of a problem.

☐ ☐ 9. I tend to rely on hunches and the feeling of "rightness" and "wrongness" when moving toward the solution of a problem.

☐ ☐ 10. Many of the penetrating insights I have experienced have been touched off by seemingly insignificant coincidences.

LOS MEDANOS COLLEGE

Notes: Number 3

TIER ONE CURRICULUM WORKSHOP

October 12, 1982

PLURALISM: Jerry Davis, Chet Case

(Notes by Sandy Booher, Edited by C. Case)

1. Chet opened the meeting by discussing the Pluralism criteria:

   a. mainly a content criteria, but has process aspects;
   b. has more aspects than might appear from a literal reading of the criteria;
   c. used transparency to touch on definitions and considerations to be built into courses, as follows:

      1) Pluralism

         Does the course encourage learners to consider the variety of perspectives, experiences and persuasions that have an impact on society? (criteria)

      2) Definitions

         a) plural - more than one in number;
         b) pluralism (philos) - a system of thought that recognizes more than one ultimate principle;
         c) pluralistic society - "A pluralistic society accepts and reconciles differences within a framework of concensus."

      3) Aspects to Work Into Courses

         a) contributions of minority groups and individuals to fields of study and society;
         b) minority and women's concerns;
         c) examining and countering processes of biased prejudicial, stereotyped, ethnocentric, thinking;
         d) showing relationships of a whole to its parts, exploring the idea of Unity with Diversity, tracing interrelatedness of sub-systems within systems, showing differences and commonalities among living things.

2. Jerry Davis: Commonalities and similarities in living things from a biological point of view

   a. Slide presentations showing varieties of life forms (photos by Jerry .... very nice!)
      When we observe nature, we are intrigued by the variety of life forms, from "single-celled little critters" to large organisms. There is enormous diversity.

2. Jerry Davis (con't)

   b. A biologist questions how and why we're different (and the same). This is reflected in the differences in single cells. The chemical recipes for creating these differences comes from DNA in the chromosomes. Therefore, manipulating DNA will enable us to manipulate the forms that are created.

   c. DNA contains recipes for making protein, such as:

      1) antibodies;
      2) major structural building blocks of cells (hemoglobin, muscle tissue, intracellular structures);
      3) enzymes - special proteins allowing chemical reactions to take place:
         "Life is nothing more than chemical reactions in a cell". Burning one sugar molecule takes 100 different enzymes!
      4) hormones - example: insulin ... DNA could be manipulated to prevent diabetes;
      5) proteins are made up of amino acids in various combinations - sickle cell anemia is caused by one amino acid being out of place, out of 570 lined up according to DNA "instructions".

      Although people have some differences in their DNA recipes, all have many in common ... all living organisms share many DNA recipes, particularly cellular structures

   d. How does DNA code for a particular protein ... Jerry explained the process using a model of the DNA, examples, and diagram of the cell.

   e. Humans have far more similarities in their DNA than differences

   f. Jerry urged --- don't forget the power of the environment in shaping differences, e.g., differences in identical twins due to different experiences

   g. Diversity and similarities are due to DNA and the environment

   h. Jerry provided a hand-out that highlighted his main points. (Attachment A). Jerry spoke about the possibilities for making connections of the biological model and society

   i. Chet commented on the power of the metaphor of the living organism for the student who may not have a "structure" for organizing and interpreting ostensibly disparate events, ideas, things ... the commonalities and differences among living things powerfully depicts the possibilities of Unity (as in a system) and Diversity (as in the sub-systems) or in the relations of the Parts to the Whole.

3. Outstanding refreshments provided by Stan Chin and Bob Marshall. Thanks!

4. Workshop business

    a. Creativity is the next topic. Up are Larry Howard, and Dave Nakaji. Stan Chin will be involved.
    b. The following week, the topic is Effective Thinking; Gil Rodriguez and Chet.
    c. Chris Meek will do refreshments next week.
    d. Chet will bring the calendar next week so all the rest of the topics can be covered and volunteers can choose their day for refreshments.

5. Social Science and Pluralism: Chet Case

Chet commented the particular appropriateness of the social sciences for this criteria ... it can be defined outright, and illustrated with examples. He highlighted ways in which social sciences can treat pluralism, as follows:

a. Define and illustrate the concept and relate to

... civil rights;
... constitutional guarantees;
... principles and practices of constitutional, democratic government;
... U.S. ideals and institutions.

b. Examine the gap between the ideal and the real and hypothesize on causes

... in a war to defend democracy, the U.S. incarcerated its own citizens of Japanese-American ancestry;
... women in the work force.

c. To show the tension between

... whole and the part (War Between the States);
... state and individual (H.D. Thoreau);
... majority and minority (civil rights movement).

d. To tell the stories of groups and individuals who have sought to overcome suppression.

d. To provide an opportunity for learners to explore their own values and ways of thinking.

6. Exercise

Chet distributed "The Husbanders and the State" to provide a basis for discussion of issues of dissent/conformity, whole/part, limits of diversity, values, and "right and wrong". (Attachment B)

Everyone read the exercise. Three groups were formed to arrive at a concensus on the "what should happen" questions and discuss the matter. Groups reported on their thinking and issues reviewed and the connection to Pluralism explored.

APPENDIX L

MEMBERS AND AFFILIATIONS OF REGIONAL ASSOCIATION OF EAST BAY COLLEGES AND UNIVERSITIES

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*Member, Executive Committee, 1981-1983

APPENDIX M

SUMMARY OF EVALUATION PLAN

EVALUATION PLAN
FOR
THE TIER ONE PROJECT

It should be clear to all concerned that product-evaluation cannot be done in any definitive way during the time span of the N.E.H. grant. There will only have been one semester of teaching to the general education criteria and even this semester will be a trial run where correction-in-process will be the order of the day. Product-evaluation (defined here as meaning (1) whether the students learned the criteria-based content, (2) whether the courses contributed to a more integrated understanding, and (3) whether the courses had impact on the students' values) will involve a two to four year longitudinal study which really should not begin until Fall, 1983. This will allow for two full semesters in in-house criticism, correction and refinement of these criteria-based general education courses.

The evaluation that will take place will be largely formative as opposed to summative, will be pro-active in the sense that the feedback will be immediate, and will be both self-evaluation and outside evaluation. Since the project is divided into three quite different parts, there will be different evaluative processes used for each.

Establishing the Criteria

During the fall semester of 1981 the task will be to hammer out consensus on the cirteria that define general education. During this phase the evaluators will be observers of the the process and will from time to time give judgmental feedback sometimes to all faculty participants and more often to the project director and to the college president. The aim here will be to use the detachment and the long community college experience of the evaluators as a backboard against which to bounce the ideas that will be popping up in this free-wheeling, brain-storming phase.

It is anticipated that first there will be generated an exhaustive array of criteria which will have to be consolidated, cleared of redundancies and pared down to a workable list of criteria upon which reasonable (not absolute) consensus will be achieved. At this point, it will be the recommendation of the evaluators that this refined set of criteria be sent to outside consultants in general education for their criticism and commentary on (a) congruence with general education theory, (b) importance or priority of the various criteria, and (c) workability.

Applying the Criteria to Course Outline

The spring semester of 1982 will bring a quite different phase in which those faculty members who are going to be teaching the general education discipline courses will be obliged to apply the newly arrived at criteria to their course outlines and to reformulate these course outlines so that all criteria are met. The evaluation will become largely self evaluation followed by in-house peer evaluation. It will not be up to the project evaluators to say whether or not a revised course outline meets the criteria. This decision will be made by fellow instructors with the involvement of the project director and the college president. It will be the task of the project evaluators to observe the process and to give reactions to its thoroughness and its fairness.

A Trial-Run on the Reformulated Courses

In the fall semester of 1982, those revised courses which had full or partial peer endorsement will be taught in a trial run in which correction and refinement is made as the semester progresses. Prior to the opening of the semester there will be a day-long session in which resident experts on each criteria will give ideas on how their respective criteria can be applied to the disparate courses that make up the tier one general education package. Then on a weekly basis there will be sessions which zero in on certain criteria with contributions from various faculty members on the pedagogy of how they are applying this criterion to their particular courses. The project evaluators again will resume the role of observer and commentator. They will, of course, not interface with process but will have frequent meetings with the project director to give evaluative feedback to him.

The project evaluators will request that a student opinionnaire be developed designed to give a rough measurement of the students' awareness of whether the criteria were addressed in the course. They will request that this instrument be given in the fourth or fifth week of the semester, after the class membership has stabilized and then administered again at the end of the semester. This pre and post testing should at least give some measurement of whether the course content reflected the agreed upon criteria of general education at the discipline course level. Since the project evaluation will have been seen as contributors, not judges, they advise that the scoring and interpretation of this measurement of student awareness of the criteria be done by a completely detached specialist.

The remaining task for the project evaluators in this last semester of the project will be to interview all participant faculty members. A more or less standardized interview form will be developed but the interviews will be of an open-ended nature to glean as much valuable information as possible.

The final task will be to write an end of grant report in which all pertinent observations on substance and process, plus the results of the pre and post student opinionnaire will be recorded for the purpose of the National Endowment for the Humanities and, more important, for the continued improvement and further evaluation of the tier one general education project.

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APPENDIX N

SUMMARY AND INTERPRETATION OF TIER I GENERAL EDUCATION COURSE SURVEY BY RICHARD E. PETERSON, Ph.D., EDUCATIONAL TESTING SERVICE, BERKELEY, CALIFORNIA

THE TIER ONE GENERAL EDUCATION COURSE SURVEY

Richard E. Peterson
Educational Testing Service
Berkeley

March 1983

Background and Method

This survey was carried out as part of the evaluation of Tier I of Los Medanos College's broader, three-tier general education program. Tier I requires degree aspirants to complete at least one course in each of six academic areas (social science, physical sciences, etc.). Designated general education Tier I courses in each of the areas seek in common to foster student understanding or skill on nine agreed-upon general education criteria. This is a fundamental tenet of LMC's general education program and its overall Educational Plan.

The Tier I course survey was designed to solicit information from students concerning their level of understanding, awareness or skill on each of the nine Tier I criteria. The survey was completed by students in 33 courses and sections at the beginning of the fall 1982 semester (the fourth week) and again at the end of the eighteen week term. Analysis of the differences between these pre and post surveys is the central objective of this brief report.

The survey consisted basically of three questions about each criteria: a five-point rating scale and two* questions asking for open-ended responses which were scored (coded) on a six-point scale.

Two survey forms were used, which were dubbed the "short" and "long" forms. The short form, used in 19 classes, consisted only of the rating scale (one rating for each criteria). The long version (shown on pp. 13 to 22) contained, for each criteria, both the rating scale and the two (or one) additional open-ended questions. The decision to use a short as well as long form was a compromise between extensive class time (to fill out the long form) and the desire to give back to every participating instructor some information provided by the open-ended responses on the long form. Typically an instructor who taught two sections of the same Tier I course used the short form in one section and the long form in the other.

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*One question only for the Writing and Reading criteria.

The Course Tables

Calculations were made separately for each of the 33 classes or sections. These are given beginning on page 23. For each general education criterion, results are given for both the pre and post surveys. Included for each question are the mean (average) response of the class, the standard deviation (SD, a measure of the spread of the answers), and the number of students who omitted the item. Means are based only on actual responses; students who omitted the question are not included. The right-hand column presents the differences between the pre- and post-survey means for each rating or question. A negative difference indicates that the average score on the item in question was lower on the post survey than on the pre survey.

A difference between means can be regarded as statistically significant if it exceeds one-half the larger of the two associated standard deviations. For example, in the first course data table, for item 8 the difference is .71; it is significant since it is larger than .47 (one half of .93).

For the 14 classes that used the long form, there are four rows of data for each criteria (except for Writing and Reading). The first row is for the standard rating scale; the second two, the open-ended questions; and the fourth, labeled "MEAN," is in each instance the average of the three figures just above. These MEANS, reflecting all three items, are a crude index of the level of awareness of a given criteria in the class in question. As indexes, they are far from satisfactory, however, since the three questions contributing to each MEAN seem to be measuring quite different things. Given this caution, these MEANS can be compared vertically to judge the relative impact of the course on each of the nine criteria.

The results from the rating scales--the first row in each set--can be comfortably compared. The data from the open-ended questions can not; the questions are quite different from one criterion to another.

The bottom two rows on the (long-form) tables summarize across the nine criteria. The data in the MEAN OF MEANS row are less satisfactory, for the reasons given. All the differences (for all 14 classes)--given in the right-hand column--at least are positive (in the direction of greater understanding). The MEAN (1-9) data, which are averages across the nine rating scales (1., 2., etc. in the tables), are more reliable and interpretable.

The figures in the "short" tables are more readily interpretable.* They can all be compared vertically (across criteria). Thus in the very first course table, the rated increase in Intradisciplinary understanding (.91) is much larger (by a factor of 6!) than Reading (skill) in the Learning Process (.15).

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*They are not entirely comparable across criteria, since the phrasing of each rating question differed, as did the response options.

The "N" figure at the top of each table indicates the number of students in the class who filled out both the pre and post questionnaires. These numbers are frequently quite small. Readers should also give attention to the numbers of omits, which are frequently quite large. If, for example, in a class of 15 students (N=15) 12 omitted a given question (on either the pre or post survey), the results for that question would have little meaning.

With suitable caution, the bottom-line on every table (short and long)--which is based on the ratings only (not the open-ended questions) --can be compared across all 33 tables. The extreme lower-right figure on each table is perhaps the best indicator from the survey of the effectiveness of each course in inducing improvement across all nine general education criteria combined.

The Summary Table

The first table given (page 13) summarizes the pre--post differences across all 33 LS courses. The entries are simply the averages of the differences given in the right-hand column of the course tables, organized by major academic area (Behavior Sciences, Social Sciences, etc.). Under the heading for each area, the numbers of classes using either the long or short form are given.

As an example, the top-left entry--.60--is the average difference (increase) between pre and post surveys on the rating scale for the Intradisciplinary criterion, and as reported by students in seven Behavioral Science LS courses (the rating scale is included in both the short and long forms). The figure just below--.49--is the average difference (increase) on the first Intradisciplinary open-ended question, for the two Behavioral Science classes that filled out the long survey.

The right-hand column contains the same information, aggregated across all 33 courses included in the survey. The first entry for each criteria, again, is based on 33 classes or sections; the second and third are from the 14 classes that used the long form.

All the entries can be compared horizontally, across the academic divisions. The first figures for each criterion (the ratings: 1., 2., etc.) are comparable vertically (with suitable caution). The bottom line, again, summarizes across the criterion ratings for each academic area, and for all the LS courses combined.* All the data in this summary table may be regarded as (program) "norms," against which the right-hand column results for any of the separate courses may be compared.

Highlights from the Survey's Results

If one looks generally at the figures in the summary table, it is clear that the overwhelming majority are positive--indicative of increased understanding, awareness or skill across the nine general education criteria, according to the students' own self-report. Many of the figures--differences between average pre- and post-survey responses --are very small (statistically insignificant) to be sure. However, many of the negative figures--indicating reduced understanding, etc.--are also very small. Indeed, in the right-hand column,which contains results for all the courses combined, the two negative numbers are in the reverse direction by an infinitesimally small margin.

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*Close readers will note that the "final" mean--.60--is the average of the nine figures from the column above it, and that the mean of the six figures across the bottom line is .63. The difference presumably is attributable to rounding errors.

Looking at the bottom-line data (based on the rating scales only), one can gain a sense of the relative effectiveness of the six academic areas in promoting change or growth across the nine general education criteria combined. The (four) Language Arts and the (seven) Behavioral Science courses come out at the top.

The figure for the Language Arts courses--.80--however, is inflated because of the spuriously high LA 30LS-2 Pluralism score, occasioned by the 100 percent pre-survey omits. If the average Pluralism rating for the other three Language Arts LS courses--.91--is substituted for the erroneous 1.69, the bottom-line mean becomes .71, virtually the same as that for the Behavioral Science LS courses.

Of the nine criteria, Pluralism is quite possibly the single one that is most clearly related to the usual content of one or more of the academic areas (sociology or social problems, for example). If Pluralism were removed from the calculations in the summary table, the bottom-line figures would be .65, .60, .41, .49, .69, .60 and .55.

Let us consider now some of the more noteworthy results separately for each of the nine LMC general education criteria.

1. Intradisciplinary. Across all the LS courses, the gain for the Intradisciplinary criterion--understanding that concepts and methods are shared among academic subjects within a broader "discipline"--was .51,

about one-half of a score point (on a five-point scale).* This was below the average for the nine criteria (.60). Two academic areas at the college, Language Arts and Humanistic Studies, were relatively effective in fostering this understanding. LA 35LS (Literature?) and Humanistic Studies: Music 10LS-1.2.80 were especially effective.

Question 1.1 asked students to describe connections with other related courses. Language Arts 35LS had the greatest impact, followed by Behavioral Science 15LS-80 (Introduction to Sociology).

Question 1.2 asked why intradisciplinary learning is useful. Beh. Sci. 15LS-80 again generated a sizeable gain, as did the Biological Science courses (particularly Biological Science 5LS).

2. Modes of Inquiry. This criteria seeks to promote understanding of how scholars or artists in the discipline in question go about their work. Across all the LS courses, the increase on the rating for this criterion was .63--just above the average for all nine criteria (.60). By far the largest increase (1.10) was recorded by the students in the Language Arts LS courses. Apparently students more readily come to understand how writers write than how scientists, for example, do science.

Question 2.1 asked about steps involved in scholarly study within the discipline. There were no noteworthy gains, and a number of classes recorded reverses.

All the differences based on the ratings (items 1., 2., etc.) in the right hand column would be statistically significant. Whether a difference (gain) of, for example, .36 (Reading)--one-third of a score point on a five-point scale--has program or policy significance is another question.

Question 2.2 asked about motivations to pursue new knowledge in the discipline. The strongest (though relatively modest) gains came in the Behavioral and Biological Science courses.

3. Implications of Knowledge. Student gains on the rating for this criteria--which has to do with societal implications of knowledge generated by a given discipline--again fell very near to the average for all nine criteria. The Language Arts and Behavioral Science courses (notably Beh. Sci. 15LS-1 and 16LS-1) registered the largest improvements--.80 and .74 respectively.

Question 3.1 asked for examples of how the discipline has influenced society. In general, the gains were negligible, except, interesting enough, in the music courses. Young people in America relate to (their) music.

Question 3.2 asked students to indicate ethical issues that the discipline in question have "brought about." Social Science 21LS-1 recorded an impressive increase--1.60.

4. Aesthetics of Knowledge. This criterion deals with awareness of harmony and beauty in the discipline in question. On the rating scale, the increase across all the courses over the semester was .78--the second largest gain among the nine criteria. Not surprisingly, the music (Humanistic Studies) courses together evidenced the largest increases.* Several--by no means all--of the Behavioral Science

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*The extraordinary gain for Hum. St. 10LS-1,2,80--2.25--is questionable, based as it was on only two pre-survey and four post-survey respondents.

courses also induced unusually large increases in rated awareness of aesthetic aspects of their discipline (a finding of some surprise to this observer).

Question 4.1 inquired about aspects of the discipline that had led to feelings of wonder or joy in the student. Only the (one) Language Arts (literature) class reported an appreciable gain in these sentiments.

Question 4.2 dealt with why a student would want to experience the aesthetic aspects of the discipline. No classes reported gains of any significance. Averaged across all 14 courses (using the long form), there was no change (.02).

5. Writing in the Learning Process. This criterion concerns students' perceived skill in using writing as a means for learning in the course in question. The average gain across all courses--.50 (one-half a score point)--was below the nine-criteria average (.60). There was relatively little variation from one academic area to another, with slightly less reported improvement coming, as would probably be expected, from the natural science courses. Particular classes that were especially effective on this criterion, however, ranged across the curriculum--notably Beh. Sci. 11LS-1 (1.62) and 16LS-1 (1.00), Bio. Sci. 20LS-1 (1.33), Phy. Sci. 5LS-1 (.77), and three of the four music courses!

Question 5.1 asked about what writing techniques contributed to learning in the course in question. In contrast to the criterion rating, reported shifts on this question varied widely from one academic area to another--from little average gain in the Social Science courses to .67

and .75 for the Behavioral Science and Language Arts courses respectively.

6. Reading in the Learning Process. The intent in this criterion is that students develop skill in the "uses of reading" as a means for learning throughout the curriculum. Across all the LS courses combined, the average self-rated gain in this skill was .36--about one-third of a score point on a five point scale. As such, this criterion, compared to the other eight, showed the least improvement over the semester. The largest increases were registered in several of the Behavioral Science and Language Arts courses.

Question 6.1 inquired about reading strategies that have been helpful in the course in question. In contrast to the relatively poor gains on the rating noted just above, the pre--post improvement on this question was relatively large (exceeded across all courses only by question 9.1). However, almost all of this large gain is attributable to two classes: Beh. Sci. 15LS-80 (Introduction to Sociology) and 16LS-1 (Social Problems). Elsewhere in the program, only Bio. Sci. 10LS-1 (General Biology) reported a gain of at least one-half a score point.

7. Effective Thinking. This criterion was given a fairly general definition which included, among others, abilities to think logically and independently, analyze ideas, and solve problems. Rated improvement across all the LS courses was .43--somewhat below the nine-criteria average. The variation from one academic area to another was very small, ranging from .56 for the Behavioral Science courses to .33 for the Physical Science courses.

Question 7.1 asked about which aspects of effective thinking the course in question fosters. Students in LA 35LS-1 and Hum. St. 10LS-2 reported the strongest improvement.

Question 7.2 dealt with students' opinions about what contributes to effective thinking in the field in question. The only noteworthy improvement in student understanding in this regard came in Beh. Sci. 16LSI-1 (a .69 score change).

8. Creativity. This criterion deals with students' awareness of the discipline's capacity for producing new ideas and products. Overall, the average increase was .58, just slightly below the average for the nine criteria combined. The Behavioral and Social Science courses clearly fostered the biggest improvements, with Beh. Sci. 15LS-1 and 16LS-1 and Soc. Sci. 10LS-80 (Introduction to Economics) quite outstanding on this dimension.

Question 8.1 asked for the student's own definition of creativity and how it related to the discipline's creative strategies. Interestingly, the pattern of results here was quite different from that for the rating. The only noteworthy gain came in LA 35LS-1. In many classes there were reverses, particularly in the Social Science area.

Question 8.2 asked the student whether (s)he regarded him(her)self as potentially creative in the discipline in question. The pattern of results here is different again. Students' beliefs about their potential creativity in the field significantly increased only in one class, Beh. Sci. 16LS-1 (Social Problems).

9. Pluralism. The Pluralism criterion concerns students' understanding of the beliefs and experiences of diverse cultural groups as they relate to the discipline in question. Of the nine LMC general education criteria, this is one on which there was the greatest change across all the courses in the program during the semester. The only trough in the pattern of generally substantial positive change was, as would be expected, for the Physical Science courses. The largest shifts came in Beh. Sci. 15LS-1 and 16LS-1.

Question 9.1 asked for examples of contributions from minority cultures to the discipline in question. Pre- and post-survey responses differed by a wider margin than on any other question (not rating) in the survey. Relatively large gains were recorded in several of the Behavioral Science courses and in LA 35LS-1 (the latter is questionable because of excessive omits).

Question 9.2 concerned reasons why there should be study of the diversity of cultures, within the context of the discipline. Noteworthy improvement was registered in several of the Behavioral and Social Science classes. (The LA 35LS-1 figure should be discounted because of excessive omits.)

AVERAGE OF MEAN CHANGES ACROSS COURSES

	BEH SCI L=2 S=5	SOC SCI L=2 S=3	PHY SCI L=3 S=3	BIO SCI L=4 S=3	LA L=1 S=3	HUM STU L=2 S=2	ALL LS L=14 S=19
1. INTRADISC	.60	.61	.28	.35	.67	.75	.51
1.1	.49	.16	.02	-.06	.81	.17	.16
1.2	-.12	.05	.18	.46	-.02	.23	.19
2. MODES/INQ	.70	.75	.44	.46	1.10	.46	.63
2.1	.20	-.47	.08	.16	.35	-.38	-.01
2.2	.34	.14	-.11	.34	-.25	-.31	.08
3. IMP/KNOW	.74	.66	.39	.62	.80	.56	.62
3.1	.12	.39	-.28	.23	-.46	.52	.12
3.2	.15	.80	.53	-.38	.30	.52	.24
4. AESTH/KNOW	.90	.75	.40	.83	.76	1.10	.78
4.1	-.38	.12	.35	-.04	.75	.18	.10
4.2	0.00	.32	-.16	.20	0.00	-.35	.02
5. WRITING IN LP	.56	.49	.37	.48	.60	.55	.50
5.1	.67	.05	.26	.21	.78	.07	.28
6. READING IN LP	.55	.24	.21	.32	.56	.28	.36
6.1	1.76	.13	-.17	.23	.03	.15	.32
7. EFF THINKING	.38	.55	.33	.39	.50	.54	.43
7.1	-.11	.28	-.06	.02	.63	.42	.12
7.2	.31	.15	.16	.18	.25	-.26	.13
8. CREATIVITY	.77	.78	.37	.45	.50	.59	.58
8.1	-.59	.29	.16	.07	1.19	-.33	.05
8.2	.44	-.24	.07	-.15	-.12	-.01	-.01
9. PLURALISM	1.06	.85	.52	.92	1.69*	.93	.96*
9.1	.42	.04	.16	.34	1.33	.27	.33
9.2	.65	.75	-.16	.06	1.00	.19	.28
MEAN (1-9)	.70	.63	.37	.54	.80*	.64	.60*

*These figures are spuriously high for reasons explained in the text. Readers may substitute .91 and .87 and, in the bottom line, .71 and .59

LOS MEDANOS COLLEGE

TIER ONE GENERAL EDUCATION COURSE SURVEY

FALL, 1982

To The Student:

Your responses to the following questions will be very helpful for the further development of Los Medanos College's general education program, which is currently being revised.

You will be asked to respond to these questions at the beginning of this semester and again toward the end so that your awareness or understanding of new elements in the course can be assessed. Students in all general education courses (Tier One) will be asked to do this questionnaire.

Your responses in no way will affect your grade in this course. At the beginning of the course, you may have little to say to many of the questions, and this is all right. Simply give the responses that best fit you at the time you do the questionnaire.

In order to compare your responses at the beginning of the semester to those at the end, it will be necessary to ask for your name. All data, however, will be treated as confidential, and will be reported in an anonymous manner.

Thank you for your assistance,

Karl O. Drexel,
Program Evaluator

* *

Name: ____________________ Date: ____________

This course: ______________________________
area number/section title

Approximate number of college units you have completed: ____________

Other courses you are taking this semester:

area number/section title	area number/section title
area number/section title	area number/section title
area number/section title	area number/section title

1. INTRADISCIPLINARY

Families of courses within a field of study, or "discipline," will share certain concepts, information, methods, subject matter, and values and concerns. At this time, how well do you understand the connections, or interrelatedness, of this course to other courses in its "family?"

Circle the number on the scale below that best corresponds to your present understanding.

1	2	3	4	5
not at all	not very well	somewhat well	fairly well	very well

Instructions: Please write out answers to the following questions on the basis of what you presently know. Leave a space blank if you have no basis for answering.

1.1. Name other courses that this course relates to closely and tell how they are interconnected:

1.2. Why is an approach to learning that shows the interconnectedness of knowledge and relationships among fields of study to be beneficial and productive?

2. MODES OF INQUIRY

At this time, how well can you describe the ways investigators (e.g., scholars, scientists, researchers, students) and/or creators (e.g., artists, writers, composers, students) in this discipline go **about** generating or testing knowledge or producing a creative work?

Circle the number on the scale below that best corresponds how well you can describe **them at this** time.

1	2	3	4	5
not at all	not very well	somewhat well	fairly well	very well

Instructions: Please write out answers to the following questions on the basis of what you presently know. Leave a space blank if you have no basis for answering.

2.1. What steps does an investigator or creator in this discipline go through to gain new knowledge or create a work?

2.2. Why, in your judgement, do persons in this discipline pursue new knowledge or creations?

3. IMPLICATIONS OF KNOWLEDGE

At this time, how aware are you of the ways this discipline's knowledge affects the ways people live their lives, relate to their physical and natural environment, how society is organized and functions, and/or the ethical questions it poses?

Circle the number on the scale below that best corresponds to your present awareness.

1	2	3	4	5
not at all aware	slightly aware	somewhat aware	generally aware	very aware

Instructions: Please write out answers to the following questions on the basis of what you presently know. Leave a space blank if you have no basis for answering.

3.1. What examples can you give of when and how the knowledge of this discipline of this course influenced how and what people think, or relate to their environment, or how society is organized and functions, or what is produced and how?

3.2. In your judgement, what important ethical issues of today has this discipline's knowledge brought about?

4. AESTHETICS OF KNOWLEDGE

The aesthetic aspects of a discipline's knowledge pertain to that which is pleasing, appealing, harmonious, joyful, beautiful, inspiring, or elegant in what the discipline produces or how it produces. At this time, how aware are you of these aspects of this discipline's knowledge?

Circle the number on the scale below that best corresponds to your present awareness.

1	2	3	4	5
not at all aware	slightly aware	somewhat aware	generally aware	very aware

Instructions: Please write out answers to the following questions on the basis of what you presently know. Leave a space blank if you have no basis for answering.

4.1. What aspects of this discipline's knowledge, methods or creations give you feelings of wonder, awe, or joy and inspiration and perhaps a feeling for the possibilities of human understandings?

4.2. Why or why would not a student want to learn and experience the aesthetic aspects of a discipline?

5. WRITING IN THE LEARNING PROCESS

At this time, how skillfull do you consider yourself in the uses of writing as a means for learning in this course?

Circle the number on the scale below that best corresponds to your skillfullness.

1	2	3	4	5
not at all skillful	a little skillful	somewhat skillful	fairly skillful	very skillful

Instructions: Please write out answers to the following questions on the basis of what you presently know. Leave a space blank if you have no basis for answering.

5.1. What strategies or technique in writing help you learn the material in this course?

6. READING IN THE LEARNING PROCESS

At this time, how skillful do you consider yourself in the uses of reading as a means for learning in this course?

Circle the number on the scale below that best corresponds to your skillfulness.

1	2	3	4	5
not at all skillful	a little skillful	somewhat skillful	fairly skillful	very skillful

Instructions: Please write out answers to the following question on the basis of what you know at the present time. Leave the space blank if you have no basis for answering.

6.1. What strategies or techniques in reading help you learn the material in this course?

7. EFFECTIVE THINKING

Effective thinking has many aspects, including logical thinking, independent thinking, separting and combining ideas, finding and examining assumptions, coming to conclusions, solving problems, coming up with new ideas, guessing and using intuition. Not all of these aspects will be touched in this course, but generally speaking, how would you describe your effectiveness of thinking in this field of study?

Circle the number on the scale below that best corresponds to your self-description.

1	2	3	4	5
not at all effective	slightly effective	somewhat effective	fairly effective	very effective

Instructions: Please write out answers to the following questions on the basis of what you know at the present time. Leave a space blank if you have no basis for answering.

7.1. What aspects of effective thinking does this course help promote?

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7.2. In your judgement, what helps and what hinders people in becoming effective thinkers in this field of study?

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8. CREATIVITY

Creativity is often defined as "seeing the familiar in new ways." Creativity is involved in solving problems, coming up with new ideas, or experiencing and producing works of art, literature or music. At this time, what is your awareness of creativity in this field of study?

Circle the number on the scale below that best corresponds to your present awareness.

1	2	3	4	5
not at all aware	slightly aware	somewhat aware	generally aware	very much aware

Instructions: Please write out answers to the following questions on the basis of what you presently know. Leave a space blank if you have no basis for answering.

8.1. Give your definition of creativity and relate it to this discipline's ways of pursuing knowledge or creating.

8.2. Generally speaking, do you think of yourself as a creative, or potentially creative, person in this discipline?

9. PLURALISM

At this time, how well informed are you on the various viewpoints, beliefs, and experiences of persons, groups or cultures that relate to this field of study?

Circle the number on the scale below that best corresponds to how well informed you consider yourself at this time.

1	2	3	4	5
not at all informed	slightly informed	somewhat informed	generally informed	very well informed

Instructions: Please write out answers to the following questions on the basis of what you know at the present time. Leave a space blank if you have no basis for answering.

9.1. What examples can you give of the contributions of persons, groups or cultures other than those of the dominant culture to this discipline's knowledge?

9.2. Within this field of study, what arguments can be advanced for acknowledging and studying the broad variety of viewpoints, experiences, and belief systems that exist and have an impact on our diverse society?

BEH SCI 10LS-1 N = 24 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	2.92	1.06	0	3.83	.48	.91
2. MODES/INQ	0	3.04	.91	0	3.38	.82	.34
3. IMP/KNOW	1	3.35	.88	0	3.96	.75	.61
4. AESTH/KNOW	0	2.67	1.05	0	3.38	.71	.71
5. WRITING IN LP	1	3.22	.90	0	3.63	.77	.41
6. READING IN LP	1	3.52	.90	0	3.67	.87	.15
7. EFF THINKING	2	3.23	1.19	1	3.52	.90	.29
8. CREATIVITY	1	3	1.04	1	3.48	.85	.48
9. PLURALISM	5	3.05	.85	1	3.74	.92	.69
MEAN (1-9)	1.2	3.11	.98	.3	3.62	.79	.51

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*Calculation of all means is based on actual responses to the item; omits are excluded from the calculation.

BEH SCI 10LS-2 **N = 8** **SHORT**

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	3.13	.83	0	3.75	.71	.62
2. MODES/INQ	0	3.13	.99	1	3.43	1.27	.30
3. IMP/KNOW	0	3.25	1.67	0	3.25	1.28	0.00
4. AESTH/KNOW	0	3.5	1.07	2	3.83	.41	.33
5. WRITING IN LP	0	3	1.20	0	3.13	1.13	.13
6. READING IN LP	0	3.63	.92	0	3.63	.92	0.00
7. EFF THINKING	0	3.38	1.06	0	3.25	1.28	-.13
8. CREATIVITY	3	3.8	.45	0	3.38	.52	-.42
9. PLURALISM	0	2.5	.76	0	3.5	1.07	1.00
MEAN (1-9)	.3	3.26	.99	.3	3.46	.95	.20

BEH SCI 10LS-3 N = 16 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	3.44	.63	0	3.13	.81	-.31
2. MODES/INQ	0	2.69	.79	1	3.4	.63	.71
3. IMP/KNOW	0	3	.73	0	3.25	.77	.25
4. AESTH/KNOW	0	2.81	1.11	0	2.69	.95	-.12
5. WRITING IN LP	0	3.19	.91	0	3.38	1.02	.19
6. READING IN LP	0	3.38	1.02	0	3.63	.62	.25
7. EFF THINKING	1	3.47	.83	1	3.53	.99	.06
8. CREATIVITY	1	3	1.00	1	3.33	.90	.33
9. PLURALISM	2	2.86	.77	2	3.14	1.03	.28
MEAN (1-9)	.4	3.09	.87	.6	3.28	.86	.18

BEH SCI 11LS-1 N = 8 **SHORT**

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	2.75	1.28	0	4.13	.83	1.38
2. MODES/INQ	0	2.75	1.04	0	3.88	1.25	1.13
3. IMP/KNOW	0	3.38	1.30	0	3.75	1.39	.37
4. AESTH/KNOW	1	2.29	1.50	0	3.13	.99	.84
5. WRITING IN LP	0	2.88	.99	0	4.5	.76	1.62
6. READING IN LP	0	3.25	1.16	0	4.5	.53	1.25
7. EFF THINKING	1	3.29	1.25	0	3.88	1.13	.59
8. CREATIVITY_	1	2.86	1.57	0	3.13	1.25	.27
9. PLURALISM	1	2.86	1.35	0	4	.53	1.14
MEAN (1-9)	.4	2.92	1.27	0	3.88	.96	.95

BEH SCI 15LS-1 N = 16 **SHORT**

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	3.5	.73	0	4.13	.72	.63
2. MODES/INQ	1	3.2	.77	0	4.19	.83	.99
3. IMP/KNOW	0	2.56	.89	0	4.38	.89	1.82
4. AESTH/KNOW	3	2.62	1.19	0	4.44	.81	1.82
5. WRITING IN LP	0	3.31	.79	0	3.56	.89	.25
6. READING IN LP	1	3.6	1.12	0	4.5	.63	.90
7. EFF THINKING	4	3.33	.89	0	3.94	.77	.61
8. CREATIVITY	4	2.75	1.06	0	4.25	.68	1.50
9. PLURALISM	2	2.86	1.10	0	4.5	.73	1.64
MEAN (1-9)	1.7	3.08	.95	0	4.21	.77	1.13

BEH SCI 15LS-80 N = 17 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	3.59	1.00	1	3.94	.68	.35
1.1		3	3.29	.91	1	3.88	.96	.59
1.2		9	2.88	.99	2	3.67	.98	.79
	MEAN	4	3.25	.97	1.3	3.83	.87	.58
2.	MODES/INQ	0	3.29	1.16	1	3.94	.85	.65
2.1		2	3.67	1.05	1	3.75	1.00	.08
2.2		3	3.57	1.02	1	4.13	1.31	.56
	MEAN	1.7	3.51	1.08	1	3.94	1.05	.43
3.	IMP/KNOW	1	3.56	1.21	0	4.24	.75	.68
3.1		6	2.73	1.19	2	2.73	1.62	0.00
3.2		8	2.89	.78	3	3	1.11	.11
	MEAN	5	3.06	1.06	1.7	3.32	1.16	.26
4.	AESTH/KNOW	3	2.86	1.23	1	3.94	.68	1.08
4.1		8	3.33	1.41	1	3.13	1.02	-.20
4.2		11	1.67	1.03	3	1.79	1.48	.12
	MEAN	7.3	2.62	1.22	1.7	2.95	1.06	.33
5.	WRITING IN LP	1	3.19	1.33	1	3.5	.89	.31
5.1		3	2.79	1.19	4	3.23	1.17	.44
	MEAN	2	2.99	1.26	2.5	3.37	1.03	.38
6.	READING IN LP	1	3.88	1.09	0	4.29	.77	.41
6.1		3	2.64	1.15	0	4.18	1.33	1.54
	MEAN	2	3.26	1.12	0	4.24	1.05	.98
7.	EFF THINKING	1	3.69	.95	2	4.13	.83	.44
7.1		6	2.55	1.21	2	2	1.20	-.55
7.2		4	3	1.15	2	2.93	.96	-.07
	MEAN	3.7	3.08	1.10	2	3.02	1.00	-.06
8.	CREATIVITY	1	3.06	1.06	0	3.94	.90	.88
8.1		11	3.5	1.52	4	2.62	1.12	-.88
8.2		3	3	.88	2	3	.65	0.00
	MEAN	5	3.19	1.15	2	3.19	.89	0.00
9.	PLURALISM	1	3.31	1.35	1	4.19	.66	.88
9.1		9	2.25	1.28	5	2.25	.97	0.00
9.2		7	2.2	1.32	6	3.36	1.21	1.16
	MEAN	5.7	2.59	1.32	4	3.27	.95	.68
MEAN OF MEANS		4	3.06	1.14	1.8	3.46	1.01	.40
MEAN (1-9)		1	3.38	1.15	.8	4.01	.78	.63

BEH SCI 16LS-1 N = 9 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	2.89	.60	1	3.5	1.07	.61
1.1		4	3.4	1.34	0	3.78	1.39	.38
1.2		3	4.17	1.33	1	3.13	1.13	-1.04
	MEAN	2.3	3.49	1.09	.7	3.47	1.20	-.02
2.	MODES/INQ	0	2.89	.93	0	3.67	.50	.78
2.1		1	3.25	1.39	0	3.56	.88	.31
2.2		1	2.88	1.46	0	3	1.32	.12
	MEAN	.7	3.01	1.26	0	3.41	.90	.40
3.	IMP/KNOW	0	2.89	1.36	0	4.33	.50	1.44
3.1		3	2.33	1.03	0	2.56	1.51	.23
3.2		4	3.6	1.67	0	3.78	1.20	.18
	MEAN	2.3	2.94	1.35	0	3.56	1.07	.62
4.	AESTH/KNOW	1	2.13	1.13	0	3.78	.97	1.65
4.1		6	3.67	.58	0	3.11	1.76	-.56
4.2		5	1.5	1.00	1	1.38	.52	-.12
	MEAN	4	2.43	.90	.3	2.76	1.08	.32
5.	WRITING IN LP	0	3.11	.93	0	4.11	.78	1.00
5.1		1	2.88	1.25	0	3.78	1.64	.90
	MEAN	.5	3	1.09	0	3.95	1.21	.95
6.	READING IN LP	0	3.11	.93	0	4	1.00	.89
6.1		1	3.13	1.73	0	5.11	.78	1.98
	MEAN	.5	3.12	1.33	0	4.56	.89	1.44
7.	EFF THINKING	0	3.44	1.24	0	4.22	.83	.78
7.1		0	3	1.22	0	3.33	1.22	.33
7.2		1	2.75	1.98	0	3.44	1.59	.69
	MEAN	.3	3.06	1.48	0	3.66	1.21	.60
8.	CREATIVITY	0	2.22	.67	0	4.56	.53	2.34
8.1		4	3.2	.45	0	2.89	1.62	-.31
8.2		2	2.57	.53	0	3.44	1.59	.87
	MEAN	2	2.66	.55	0	3.63	1.25	.97
9.	PLURALISM	0	2.67	.71	0	4.44	.73	1.77
9.1		7	2	0.00	3	2.83	1.72	.83
9.2		7	3	1.41	1	3.13	1.36	.13
	MEAN	4.7	2.56	.71	1.3	3.47	1.27	.91
MEAN OF MEANS		1.9	2.92	1.08	.3	3.61	1.12	.69
MEAN (1-9)		.1	2.82	.94	.1	4.07	.77	1.25

* SDC SCI 10LS-1 N = 22 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	1	3	1.00	0	3.55	.74	.55
1.1		12	2.7	1.06	11	2.82	.98	.12
1.2		13	3.56	1.13	8	3.14	1.51	-.42
	MEAN	8.7	3.09	1.06	6.3	3.17	1.08	.08
2.	MODES/INQ	3	3.11	.81	0	3.32	.99	.21
2.1		17	2.2	.45	8	2.64	1.45	.44
2.2		14	3.25	.89	7	3.6	1.40	.35
	MEAN	11.3	2.85	.72	5	3.19	1.28	.33
3.	IMP/KNOW	3	3.37	.96	0	3.68	.95	.31
3.1		15	2.86	1.57	9	3.08	1.50	.22
3.2		19	2.67	2.08	10	2.67	1.37	0.00
	MEAN	12.3	2.97	1.54	6.3	3.14	1.27	.18
4.	AESTH/KNOW	3	3.16	1.12	0	3.27	1.12	.11
4.1		16	2.83	1.33	13	2.78	1.20	-.05
4.2		19	1	0.00	14	1.5	.93	.50
	MEAN	12.7	2.33	.82	9	2.52	1.08	.19
5.	WRITING IN LP	1	3.38	1.02	0	3.68	.84	.30
5.1		9	2.15	1.07	7	2.27	.80	.12
	MEAN	5	2.77	1.05	3.5	2.98	.82	.21
6.	READING IN LP	2	3.85	.75	0	3.77	.87	-.08
6.1		7	2.2	.94	4	2.11	.47	-.09
	MEAN	4.5	3.03	.85	2	2.94	.67	-.08
7.	EFF THINKING	1	3.67	.97	0	3.95	.84	.28
7.1		11	2.73	1.10	6	2.31	1.08	-.42
7.2		16	2.17	1.60	9	1.92	.76	-.25
	MEAN	9.3	2.86	1.22	5	2.73	.89	-.13
8.	CREATIVITY	1	3.14	1.06	0	3.36	1.00	- .22
8.1		14	3.13	.99	12	2.8	1.23	-.33
8.2		13	2.67	1.32	7	2.2	.41	-.47
	MEAN	9.3	2.98	1.12	6.3	2.79	.88	-.19
9.	PLURALISM	5	3.18	1.13	1	3.43	1.03	.25
9.1		20	2.5	.71	15	2.57	1.27	.07
9.2		21	2	0.00	20	3.5	2.12	1.50
	MEAN	15.3	2.56	.61	12	3.17	1.47	.61
MEAN OF MEANS		9.8	2.83	1.00	6.2	2.96	1.05	.13
MEAN (1-9)		2.2	3.32	.98	.1	3.56	.93	.24

SOC SCI 10LS-2 N = 15 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	1	3.29	.99	0	4.07	.80	.78
2. MODES/INQ	1	2.71	1.07	1	3.5	.76	.79
3. IMP/KNOW	1	3.36	.93	0	4.13	.92	.77
4. AESTH/KNOW	1	2.36	1.08	1	3.36	.84	1.00
5. WRITING IN LP	1	3.36	.93	0	4.13	.64	.77
6. READING IN LP	1	3.43	.85	0	4.13	.74	.70
7. EFF THINKING	2	3.46	.78	0	4	.53	.54
8. CREATIVITY	1	2.71	1.07	1	3.64	.74	.93
9. PLURALISM	2	2.77	1.09	0	3.87	.52	1.10
MEAN (1-9)	1.2	3.05	.98	.3	3.87	.72	.82

SOC SCI 10LS-80 N = 16 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	3	1.10	0	4	.82	1.00
2. MODES/INQ	0	2.44	.73	0	3.75	.93	1.31
3. IMP/KNOW	0	3.38	.96	0	4.13	1.02	.75
4. AESTH/KNOW	1	2.47	.99	1	3.4	1.06	.93
5. WRITING IN LP	2	3.21	.97	0	3.75	.77	.54
6. READING IN LP	0	3.63	.72	0	4.25	.68	.62
7. EFF THINKING	1	3.27	.70	0	3.81	.75	.54
8. CREATIVITY	0	2.38	1.15	0	3.69	.79	1.31
9. PLURALISM	0	2.75	.93	0	3.94	.68	1.19
MEAN (1-9)	.4	2.95	.92	.1	3.86	.83	.91

SOC SCI 21LS-1 N = 14 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	2	2.83	.72	1	3.15	1.21	.32
1.1		5	3	1.00	4	3.2	1.23	.20
1.2		5	2.89	1.36	4	3.4	.97	.51
	MEAN	4	2.91	1.03	3	3.25	1.14	.34
2.	MODES/INQ	1	2.69	1.18	1	3.23	1.01	.54
2.1		5	3.56	1.67	2	2.17	.83	-1.39
2.2		3	3.73	1.42	2	3.67	1.15	-.06
	MEAN	3	3.33	1.42	1.7	3.02	1.00	-.30
3.	IMP/KNOW	2	2.67	.98	1	3.62	.96	.95
3.1		6	2.63	1.30	3	3.18	1.60	.55
3.2		8	1.5	.84	4	3.1	1.37	1.60
	MEAN	5.3	2.27	1.04	2.7	3.3	1.31	1.03
4.	AESTH/KNOW	2	2.83	1.19	1	3.54	.97	.71
4.1		4	3.3	1.25	2	3.58	1.00	.28
4.2		6	1.5	1.07	3	1.64	1.57	.14
	MEAN	4	2.54	1.17	2	2.92	1.18	.38
5.	WRITING IN LP	2	2.33	1.44	1	2.92	1.32	.59
5.1		6	2.75	1.49	3	2.73	1.49	-.02
	MEAN	4	2.54	1.47	2	2.83	1.41	.29
6.	READING IN LP	1	3.23	1.24	1	2.92	1.19	-.31
6.1		2	1.83	.58	3	2.18	1.33	.35
	MEAN	1.5	2.53	.91	2	2.55	1.26	.02
7.	EFF THINKING	3	2.45	1.04	2	3.42	1.24	.97
7.1		5	2.11	.78	3	3.09	1.45	.98
7.2		5	2	.71	3	2.55	1.04	.55
	MEAN	4.3	2.19	.84	2.7	3.02	1.24	.83
8.	CREATIVITY	2	2.75	1.22	0	3.29	1.14	.54
8.1		6	2	.93	4	2.9	1.45	.90
8.2		5	2.22	.97	4	2.2	.63	-.02
	MEAN	4.3	2.32	1.04	2.7	2.8	1.07	.47
9.	PLURALISM	2	2	.74	1	2.54	1.05	.54
9.1		9	2	1.00	5	2	1.00	0.00
9.2		12	3	0.00	7	3	2.24	0.00
	MEAN	7.7	2.33	.58	4.3	2.51	1.43	.18
MEAN OF MEANS		4.2	2.55	1.06	2.6	2.91	1.23	.36
MEAN (1-9)		1.9	2.64	1.08	1	3.18	1.12	.54

SOC SCI 21LS-80 N = 8 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	3.25	1.16	0	3.63	.52	.38
2. MODES/INQ	0	3	.76	0	3.88	.64	.88
3. IMP/KNOW	0	3.25	1.28	0	3.75	.89	.50
4. AESTH/KNOW	0	3	1.31	0	4	.93	1.00
5. WRITING IN LP	0	3.25	.71	0	3.5	1.07	.25
6. READING IN LP	0	3.75	.89	0	4	.76	.25
7. EFF THINKING	1	3.57	.98	0	4	.76	.43
8. CREATIVITY	1	3	1.41	0	3.88	.64	.88
9. PLURALISM	1	2.57	.79	0	3.75	.46	1.18
MEAN (1-9)	.3	3.18	1.03	0	3.82	.74	.64

PHY SCI 5LS-1 N = 7 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	2.71	.95	1	3.33	1.21	.62
2. MODES/INQ	0	2.71	1.38	0	3	1.29	.29
3. IMP/KNOW	0	2.86	1.57	0	3	1.41	.14
4. AESTH/KNOW	1	2.33	.82	0	2.57	1.13	.24
5. WRITING IN LP	2	2.8	1.10	0	3.57	1.13	.77
6. READING IN LP	1	3	1.41	0	3.71	.76	.71
7. EFF THINKING	1	3.33	1.37	1	3.5	.84	.17
8. CREATIVITY	1	2.83	1.33	1	2.83	1.33	0.00
9. PLURALISM	1	2.17	.98	0	2.57	1.27	.40
MEAN (1-9)	.8	2.75	1.21	.3	3.12	1.15	.37

PHY SCI 15LS-1   N = 9   SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	4	.71	0	4	.87	0.00
2. MODES/INQ	0	3.11	1.17	0	3.78	.67	.67
3. IMP/KNOW	0	2.78	1.48	0	3.56	.73	.78
4. AESTH/KNOW	1	3.13	1.64	1	3.25	1.58	.12
5. WRITING IN LP	0	3.56	1.01	0	3.67	1.00	.11
6. READING IN LP	0	4	1.12	0	3.56	1.01	-.44
7. EFF THINKING	0	3.33	.87	0	3.44	.88	.11
8. CREATIVITY	0	3.11	1.17	0	3	1.22	-.11
9. PLURALISM	0	2.78	1.09	0	3.11	.93	.33
MEAN (1-9)	.1	3.31	1.14	.1	3.49	.99	.17

PHY SCI 20LS-1,2 N = 20 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	1	3.79	.79	1	3.74	.93	-.05
1.1		1	3.21	.63	3	2.88	.99	-.33
1.2		2	2.94	.80	3	2.94	.97	0.00
	MEAN	1.3	3.31	.74	2.3	3.19	.96	-.13
2.	MODES/INQ	0	3.3	.86	1	3.68	.89	.38
2.1		3	3.18	1.42	3	3.18	1.59	0.00
2.2		3	3.12	1.17	2	3	1.19	-.12
	MEAN	2	3.2	1.15	2	3.29	1.22	.09
3.	IMP/KNOW	0	3.8	.70	0	4	.86	.20
3.1		1	3.21	.98	4	2.69	1.30	-.52
3.2		2	2.72	1.18	4	3.06	1.29	.34
	MEAN	1	3.24	.95	2.7	3.25	1.15	.01
4.	AESTH/KNOW	0	3.25	.91	1	3.47	.84	.22
4.1		4	2.63	.89	3	3.18	.64	.55
4.2		4	2.5	1.10	4	2.81	1.05	.31
	MEAN	2.7	2.79	.97	2.7	3.15	.84	.36
5.	WRITING IN LP	1	3.11	1.05	0	3.5	.95	.39
5.1		3	1.59	.87	0	2.25	1.16	.66
	MEAN	2	2.35	.96	0	2.88	1.06	.52
6.	READING IN LP	1	3.16	.76	0	3.45	.94	.29
6.1		2	1.61	.85	4	1.5	.82	-.11
	MEAN	1.5	2.39	.81	2	2.48	.88	.09
7.	EFF THINKING	1	3.53	.84	0	3.6	.82	.07
7.1		4	2.56	1.15	1	2.58	1.35	.02
7.2		5	2.67	.90	3	2.65	1.27	-.02
	MEAN	3.3	2.92	.96	1.3	2.94	1.15	.02
8.	CREATIVITY	3	2.94	.75	0	3.65	.93	.71
8.1		5	2.47	1.13	3	2.88	1.05	.41
8.2		3	2.24	.75	2	2.44	.78	.20
	MEAN	3.7	2.55	.88	1.7	2.99	.92	.44
9.	PLURALISM	4	2.06	.68	0	2.6	1.27	.54
9.1		14	1.83	.98	9	1.55	.82	-.28
9.2		14	2.33	1.21	10	1.9	.88	-.43
	MEAN	10.7	2.07	.96	6.3	2.02	.99	-.06
MEAN OF MEANS		3.1	2.76	.93	2.3	2.91	1.02	.15
MEAN (1-9)		1.2	3.22	.82	.3	3.52	.94	.31

PHY SCI 25LS-1 N = 12 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	3.75	1.22	0	3.58	1.31	-.17
1.1		1	3.36	.81	2	3.6	1.17	.24
1.2		3	2.56	1.24	4	2.75	1.16	.19
	MEAN	1.3	3.22	1.09	2	3.31	1.21	.09
2.	MODES/INQ	0	3.33	1.07	0	3.42	1.24	.09
2.1		1	3.36	1.69	5	3.29	1.38	-.07
2.2		1	3.64	1.63	3	2.78	1.30	-.86
	MEAN	.7	3.44	1.46	2.7	3.16	1.31	-.28
3.	IMP/KNOW	1	3.27	1.19	1	3.45	1.37	.18
3.1		2	2.8	1.23	4	2.38	1.51	-.42
3.2		3	3.44	1.42	5	3.43	1.51	-.01
	MEAN	2	3.17	1.28	3.3	3.09	1.46	-.08
4.	AESTH/KNOW	1	2.82	1.60	2	3.3	1.25	.48
4.1		3	2.78	1.30	7	3	1.41	.22
4.2		5	3	1.83	6	2.17	2.04	-.83
	MEAN	3	2.87	1.58	5	2.82	1.57	-.04
5.	WRITING IN LP	2	3.2	1.23	0	3.17	1.34	-.03
5.1		3	1.78	1.09	4	2	1.20	.22
	MEAN	2.5	2.49	1.16	2	2.59	1.27	.10
6.	READING IN LP	2	3.6	.97	0	3.58	1.16	-.02
6.1		2	2.3	1.06	3	1.89	1.05	-.41
	MEAN	2	2.95	1.02	1.5	2.74	1.11	-.21
7.	EFF THINKING	1	3.45	1.13	1	3.64	1.03	.19
7.1		3	3.33	1.12	3	2.89	1.83	-.44
7.2		4	2.75	1.28	3	3.33	.71	.58
	MEAN	2.7	3.18	1.18	2.3	3.29	1.19	.11
8.	CREATIVITY	2	3	1.41	2	3.7	1.16	.70
8.1		4	2.25	1.58	5	2.43	.98	.18
8.2		4	2.88	.83	3	3	.87	.12
	MEAN	3.3	2.71	1.27	3.3	3.04	1.00	.33
9.	PLURALISM	2	2.9	1.52	2	2.9	1.45	0.00
9.1		7	1.6	.89	8	2.75	1.50	1.15
9.2		7	2.2	2.17	8	2.25	.96	.05
	MEAN	5.3	2.23	1.53	6	2.63	1.30	.40
MEAN OF MEANS		2.5	2.92	1.29	3.1	2.96	1.27	.05
MEAN (1-9)		1.2	3.26	1.26	.9	3.42	1.26	.16

PHY SCI 45LS-1　　N = 26　　LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	1	2.96	.84	1	3.52	.82	.56
1.1		11	3	1.31	6	3.15	1.39	.15
1.2		8	2.44	.70	8	2.78	.73	.34
	MEAN	6.7	2.8	.95	5	3.15	.98	.35
2.	MODES/INQ	1	3.32	.85	0	3.77	.82	.45
2.1		5	3.14	1.42	6	3.45	1.47	.31
2.2		3	3.09	.67	4	3.73	.77	.64
	MEAN	3	3.18	.98	3.3	3.65	1.02	.47
3.	IMP/KNOW	3	2.87	1.10	0	3.42	.90	.55
3.1		10	2.44	.89	9	2.53	1.12	.09
3.2		16	1.8	.79	10	3.06	1.06	1.26
	MEAN	9.7	2.37	.93	6.3	3	1.03	.63
4.	AESTH/KNOW	3	3.26	1.18	1	3.76	.88	.50
4.1		8	3.06	.64	6	3.35	.81	.29
4.2		8	2.5	.71	6	2.55	.76	.05
	MEAN	6.3	2.94	.84	4.3	3.22	.82	.28
5.	WRITING IN LP	1	3.2	1.00	2	3.58	1.06	.38
5.1		7	3.21	.85	6	3.1	.79	-.11
	MEAN	4	3.21	.93	4	3.34	.93	.14
6.	READING IN LP	1	3.68	.90	1	3.84	.94	.16
6.1		3	3.26	1.01	4	3.27	.70	.01
	MEAN	2	3.47	.95	2.5	3.56	.82	.09
7.	EFF THINKING	2	3.25	1.03	3	3.61	.84	.36
7.1		7	3.05	.97	6	3.3	1.13	.25
7.2		7	2.58	.61	8	2.5	.71	-.08
	MEAN	5.3	2.96	.87	5.7	3.14	.89	.18
8.	CREATIVITY	1	3.36	1.25	3	3.22	.95	-.14
8.1		12	2.79	.58	8	2.67	.69	-.12
8.2		8	3.06	.24	9	2.94	.43	-.12
	MEAN	7	3.07	.69	6.7	2.94	.69	-.13
9.	PLURALISM	3	2.78	1.00	2	3.67	.92	.89
9.1		10	2.81	.98	9	2.41	1.00	-.40
9.2		19	2	.82	17	1.89	.93	-.11
	MEAN	10.7	2.53	.93	9.3	2.66	.95	.13
MEAN OF MEANS		6.1	2.95	.90	5.2	3.18	.90	.24
MEAN (1-9)		1.8	3.19	1.02	1.4	3.6	.90	.41

PHY SCI 45LS-2 N = 18 SHORT

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	1	2.59	.87	1	3.29	1.05	.70
2.	MODES/INQ	0	2.61	1.14	0	3.39	1.04	.78
3.	IMP/KNOW	0	2.67	.97	0	3.17	.92	.50
4.	AESTH/KNOW	0	2.61	1.29	0	3.44	1.04	.83
5.	WRITING IN LP	0	2.72	1.18	1	3.29	.92	.57
6.	READING IN LP	1	3.12	1.32	1	3.65	1.00	.53
7.	EFF THINKING	0	2.78	1.11	2	3.88	.96	1.10
8.	CREATIVITY	0	2.83	1.04	2	3.88	.89	1.05
9.	PLURALISM	1	2.71	1.05	2	3.69	.70	.98
MEAN (1-9)		.3	2.74	1.11	1	3.52	.95	.78

BIO SCI 5LS-1 N = 22 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	3.41	.96	0	3.73	.63	.32
1.1		4	2.94	1.06	3	3.16	.96	.22
1.2		6	2.75	1.29	7	3.27	.96	.52
	MEAN	3.3	3.03	1.10	3.3	3.39	.85	.35
2.	MODES/INQ	0	3.23	1.02	0	3.55	1.01	.32
2.1		7	1.53	.92	6	2.31	1.35	.78
2.2		3	2.47	.90	5	2.88	.78	.41
	MEAN	3.3	2.41	.95	3.7	2.91	1.05	.50
3.	IMP/KNOW	1	3.19	.98	0	3.68	.99	.49
3.1		9	2.08	.95	8	2.14	.95	.06
3.2		14	2.38	1.19	9	2.08	1.19	-.30
	MEAN	8	2.55	1.04	5.7	2.63	1.04	.08
4.	AESTH/KNOW	2	3.05	1.05	0	3.59	.80	.54
4.1		10	2.83	.94	4	3.06	.87	.23
4.2		11	1.82	.98	6	2.13	.96	.31
	MEAN	7.7	2.57	.99	3.3	2.93	.88	.36
5.	WRITING IN LP	1	3.14	1.20	0	3.45	.86	.31
5.1		3	1.68	.67	4	2.11	.76	.43
	MEAN	2	2.41	.94	2	2.78	.81	.37
6.	READING IN LP	2	3.55	.76	0	3.73	.94	.18
6.1		2	1.65	.88	3	1.89	.74	.24
	MEAN	2	2.6	.82	1.5	2.81	.84	.21
7.	EFF THINKING	2	3.55	.94	1	3.67	.80	.12
7.1		8	1.93	1.00	7	2.07	.88	.14
7.2		5	1.76	.83	9	2	.91	.24
	MEAN	5	2.41	.92	5.7	2.58	.86	.17
8.	CREATIVITY	2	2.95	1.00	1	3.19	.98	.24
8.1		14	2	1.20	13	1.89	.93	-.11
8.2		11	2.45	.52	9	2.15	.69	-.30
	MEAN	9	2.47	.91	7.7	2.41	.87	-.06
9.	PLURALISM	3	2.47	1.17	0	3.27	1.08	.80
9.1		17	1.2	.45	12	1.4	.70	.20
9.2		15	1.57	.79	15	1.71	.76	.14
	MEAN	11.7	1.75	.80	9	2.13	.85	.38
MEAN OF MEANS		5.8	2.47	.94	4.7	2.73	.89	.26
MEAN (1-9)		1.4	3.17	1.01	.2	3.54	.90	.37

BIO SCI 5LS-2 N = 13 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	2	2.91	1.38	1	3	.74	.09
1.1		10	4	2.00	5	3.13	.83	-.87
1.2		10	2	1.00	5	3	.53	1.00
	MEAN	7.3	2.97	1.46	3.7	3.04	.70	.07
2.	MODES/INQ	1	2.92	.90	1	2.92	1.08	0.00
2.1		6	2.43	1.13	2	1.64	.50	-.79
2.2		8	2.2	.45	3	2.5	.71	.30
	MEAN	5	2.52	.83	2	2.35	.76	-.16
3.	IMP/KNOW	3	2.7	1.16	1	3.42	1.24	.72
3.1		9	1.75	.96	4	2.11	1.05	.36
3.2		11	3.5	.71	7	2.67	1.21	-.83
	MEAN	7.7	2.65	.94	4	2.73	1.17	.08
4.	AESTH/KNOW	4	2.22	.97	1	3.33	1.67	1.11
4.1		9	2.5	1.29	6	2.86	1.35	.36
4.2		10	2	0.00	4	2.56	1.13	.56
	MEAN	7.7	2.24	.75	3.7	2.92	1.38	.68
5.	WRITING IN LP	3	3.1	.99	1	3.58	1.16	.48
5.1		6	2.57	.79	1	2.25	.87	-.32
	MEAN	4.5	2.84	.89	1	2.92	1.02	.08
6.	READING IN LP	2	3.36	1.12	1	3.67	1.07	.31
6.1		5	2	.53	2	2.27	.65	.27
	MEAN	3.5	2.68	.83	1.5	2.97	.86	.29
7.	EFF THINKING	2	3.36	.81	1	3.5	.67	.14
7.1		4	2.11	.78	2	1.73	.65	-.38
7.2		8	2	.71	3	2	.82	0.00
	MEAN	4.7	2.49	.77	2	2.41	.71	-.08
8.	CREATIVITY	2	2.73	1.19	1	3	1.04	.27
8.1		7	2.33	1.03	4	1.78	.83	-.55
8.2		7	3	0.00	6	2.86	.38	-.14
	MEAN	5.3	2.69	.74	3.7	2.55	.75	-.14
9.	PLURALISM	3	2.8	1.23	1	3	1.04	.20
9.1		11	1.5	.71	5	1.38	.52	-.12
9.2		12	1	0.00	10	1.33	.58	.33
	MEAN	8.7	1.77	.65	5.3	1.9	.71	.14
MEAN OF MEANS		6	2.54	.87	3	2.64	.90	.11
MEAN (1-9)		2.4	2.9	1.08	1	3.27	1.08	.37

BIO SCI 5LS-3 N = 24 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	1	2.91	1.12	0	3.38	1.10	.47
2. MODES/INQ	0	2.75	1.15	0	3.5	1.06	.75
3. IMP/KNOW	0	2.96	1.20	0	3.92	.93	.96
4. AESTH/KNOW	1	2.65	1.47	1	3.52	.99	.87
5. WRITING IN LP	0	3.21	.78	1	3.48	.95	.27
6. READING IN LP	0	3.42	.72	1	3.74	1.05	.32
7. EFF THINKING	2	3	1.02	2	3.5	1.06	.50
8. CREATIVITY	4	2.6	1.27	2	3.32	.95	.72
9. PLURALISM	6	2.17	1.04	3	3.52	.93	1.35
MEAN (1-9)	1.6	2.85	1.09	1.1	3.54	1.00	.69

BIO SCI 10LS-1,2 N = 32 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	3.31	.64	1	3.94	.81	.63
1.1		3	3.45	1.18	5	3.74	1.16	.29
1.2		6	3.38	1.60	7	3.44	.96	.06
	MEAN	3	3.38	1.14	4.3	3.71	.98	.33
2.	MODES/INQ	0	3.03	.93	0	3.81	.74	.78
2.1		2	2.6	1.16	2	3.37	1.33	.77
2.2		5	3.33	1.21	1	3.61	1.09	.28
	MEAN	2.3	2.99	1.10	1	3.6	1.05	.61
3.	IMP/KNOW	1	3.23	.96	1	4.19	.95	.96
3.1		7	2.6	1.38	9	2.43	1.34	-.17
3.2		20	2.58	1.38	11	2.19	1.25	-.39
	MEAN	9.3	2.8	1.24	7	2.94	1.18	.13
4.	AESTH/KNOW	4	2.96	1.00	0	3.75	1.02	.79
4.1		10	3.05	1.50	7	3.2	1.38	.15
4.2		10	1.86	1.32	6	2.27	1.51	.41
	MEAN	8	2.62	1.27	4.3	3.07	1.30	.45
5.	WRITING IN LP	0	3.5	1.02	0	3.72	.77	.22
5.1		4	2.61	.83	2	2.8	1.06	.19
	MEAN	2	3.06	.93	1	3.26	.92	.21
6.	READING IN LP	0	3.69	.82	2	3.73	.94	.04
6.1		3	2.72	1.07	2	2.63	1.07	-.09
	MEAN	1.5	3.21	.95	2	3.18	1.01	-.02
7.	EFF THINKING	3	3.38	.90	1	3.94	.81	.56
7.1		7	3.08	1.44	4	2.79	1.73	-.29
7.2		10	2.41	1.30	10	2.64	1.47	.23
	MEAN	6.7	2.96	1.21	5	3.12	1.34	.17
8.	CREATIVITY	3	2.97	1.12	2	3.67	.96	.70
8.1		10	2.68	.84	8	3.29	1.12	.61
8.2		8	2.75	.61	5	2.89	.70	.14
	MEAN	7	2.8	.86	5	3.28	.93	.48
9.	PLURALISM	4	2.54	1.07	2	3.37	1.00	.83
9.1		25	1.86	.90	16	1.75	1.29	-.11
9.2		29	3.67	1.53	20	2.25	1.42	-1.42
	MEAN	19.3	2.69	1.17	12.7	2.46	1.24	-.23
MEAN OF MEANS		6.6	2.95	1.10	4.7	3.18	1.11	.24
MEAN (1-9)		1.7	3.18	.94	1	3.79	.89	.61

BIO SCI 10LS-3 N = 15 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	2.93	.88	0	3.73	.70	.80
1.1		4	2.09	.70	1	2.21	.58	.12
1.2		13	2	1.41	0	2.27	.59	.27
	MEAN	5.7	2.34	1.00	.3	2.74	.62	.40
2.	MODES/INQ	0	2.47	.83	0	3.6	.91	1.13
2.1		11	2	.82	1	1.86	.77	-.14
2.2		11	2.25	.50	0	2.6	1.06	.35
	MEAN	7.3	2.24	.72	.3	2.69	.91	.45
3.	IMP/KNOW	1	3.07	.83	0	3.73	.80	.66
3.1		13	1	0.00	3	1.67	.49	.67
3.2		13	2	0.00	2	2	.82	0.00
	MEAN	9	2.02	.28	1.7	2.47	.70	.44
4.	AESTH/KNOW	1	2.5	.85	1	3.43	1.02	.93
4.1		14	3	0.00	3	2.08	1.00	-.92
4.2		13	2.5	.71	2	2	.71	-.50
	MEAN	9.3	2.67	.52	2	2.5	.91	-.16
5.	WRITING IN LP	1	3.29	.91	0	3.47	.83	.18
5.1		9	1.33	.52	0	1.87	.64	.54
	MEAN	5	2.31	.72	0	2.67	.74	.36
6.	READING IN LP	1	3.36	1.01	0	3.87	.83	.51
6.1		9	1.5	.55	0	2	.65	.50
	MEAN	5	2.43	.78	0	2.94	.74	.51
7.	EFF THINKING	2	3.15	1.14	0	4	1.00	.85
7.1		12	1.33	.58	2	1.92	.49	.59
7.2		11	1.75	.50	3	2	.60	.25
	MEAN	8.3	2.08	.74	1.7	2.64	.70	.56
8.	CREATIVITY	2	3	1.29	1	3.57	1.02	.57
8.1		12	1.67	.58	5	2	.82	.33
8.2		12	2.67	.58	4	2.36	.67	-.31
	MEAN	8.7	2.45	.82	3.3	2.64	.84	.20
9.	PLURALISM	3	2.5	1.00	3	3.33	.98	.83
9.1		15	0	0.00	5	1.4	.52	1.40
9.2		15	0	0.00	9	1.17	.41	1.17
	MEAN	11	.83	.33	5.7	1.97	.64	1.13
MEAN OF MEANS		7.7	2.15	.66	1.7	2.58	.76	.43
MEAN (1-9)		1.2	2.92	.97	.6	3.64	.90	.72

BIO SCI 10LS-81 N = 12 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	1	3.55	1.04	0	4	.60	.45
2. MODES/INQ	0	3.33	1.07	0	3.58	.79	.25
3. IMP/KNOW	0	3.08	1.16	0	4	.43	.92
4. AESTH/KNOW	0	2.83	1.03	0	4.17	.72	1.34
5. WRITING IN LP	1	2.82	.60	0	3.42	.79	.60
6. READING IN LP	1	3.18	.75	0	4.08	.67	.90
7. EFF THINKING	1	3.18	1.17	0	3.75	.62	.57
8. CREATIVITY	1	3	.77	0	3.67	.78	.67
9. PLURALISM	1	2.27	.90	0	4	.74	1.73
MEAN (1-9)	.7	3.03	.94	0	3.85	.68	.83

BIO SCI 20LS-1 N = 6 SHORT

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	3.67	1.21	0	3.33	.82	-.34
2.	MODES/INQ	0	3.33	1.21	0	3.33	.82	0.00
3.	IMP/KNOW	0	3.17	1.47	0	2.83	1.33	-.34
4.	AESTH/KNOW	1	2.8	1.64	0	3	1.41	.20
5.	WRITING IN LP	0	2.67	1.21	0	4	1.26	1.33
6.	READING IN LP	0	3.5	1.38	0	3.5	1.38	0.00
7.	EFF THINKING	0	3.17	.98	0	3.17	.75	0.00
8.	CREATIVITY	0	2.67	1.21	0	2.67	1.37	0.00
9.	PLURALISM	0	2	.89	0	2.67	.82	.67
MEAN (1-9)		.1	3	1.24	0	3.17	1.11	.17

LANG ARTS 30LS-1 N = 14 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	1	3.08	.76	0	3.64	.63	.56
2. MODES/INQ	0	2.79	.70	0	3.5	.52	.71
3. IMP/KNOW	2	2.5	.80	2	3.5	.90	1.00
4. AESTH/KNOW	1	3.08	.86	0	3.86	1.10	.78
5. WRITING IN LP	0	3	.88	0	3.71	.61	.71
6. READING IN LP	0	3.29	.61	0	4.07	.73	.78
7. EFF THINKING	2	3.33	.89	2	3.92	.67	.59
8. CREATIVITY	1	3.31	.75	1	3.85	.90	.54
9. PLURALISM	2	2.42	.79	1	3.62	.87	1.20
MEAN (1-9)	1	2.98	.78	.7	3.74	.77	.76

LANG ARTS 30LS-2 N = 11 **SHORT**

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INFRADISC	0	3.73	.65	0	4.18	.40	.45
2. MODES/INQ	1	2.6	.70	0	4.18	.60	1.56
3. IMP/KNOW	4	3	.82	0	4	.63	1.00
4. AESTH/KNOW	5	3.67	.82	0	4.55	.52	.88
5. WRITING IN LP	8	3.33	1.15	0	3.91	1.14	.58
6. READING IN LP	8	4	0.00	0	4.73	.47	.73
7. EFF THINKING	8	3.33	.58	0	4.18	.75	.85
8. CREATIVITY	8	3.33	.58	0	4.27	.79	.94
9. PLURALISM	11	0	0.00	0	4	.63	4.00*
MEAN (1-9)	5.9	3	.59	0	4.22	.66	1.22

*Spuriously high because of 100 percent pre-survey omits.

LANG ARTS 30LS-80   N = 9   SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	3.56	.88	1	4.13	.35	.57
2. MODES/INQ	0	2.56	1.01	1	3.75	.46	1.19
3. IMP/KNOW	1	3.5	.93	1	3.63	.92	.13
4. AESTH/KNOW	0	3.44	1.24	1	3.75	.46	.31
5. WRITING IN LP	0	3.11	.78	1	3.75	.46	.64
6. READING IN LP	0	3.33	1.00	1	3.88	.35	.55
7. EFF THINKING	0	3.56	.88	2	3.57	.79	.01
8. CREATIVITY	1	3.25	1.28	3	3.5	.84	.25
9. PLURALISM	1	3.13	1.46	4	4	0.00	.87
MEAN (1-9)	.3	3.27	1.05	1.7	3.77	.51	.50

LANG ARTS 35LS-1 N = 12 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	3.08	.90	0	4.17	.58	1.09
1.1		5	2.29	.76	2	3.1	.99	.81
1.2		7	2.4	.89	4	2.38	.92	-.02
	MEAN	4	2.59	.85	2	3.22	.83	.63
2.	MODES/INQ	0	2.83	.72	0	3.75	.87	.92
2.1		3	1.56	.73	1	1.91	1.22	.35
2.2		4	2.25	.46	1	2	.77	-.25
	MEAN	2.3	2.21	.64	.7	2.55	.95	.34
3.	IMP/KNOW	1	3.45	1.04	0	4.5	.67	1.05
3.1		3	2.56	1.42	2	2.1	1.10	-.46
3.2		7	2.4	.89	2	2.7	.82	.30
	MEAN	3.7	2.8	1.12	1.3	3.1	.86	.30
4.	AESTH/KNOW	2	2.5	1.08	0	3.58	1.00	1.08
4.1		6	1.5	.55	4	2.25	.71	.75
4.2		8	1.75	.96	8	1.75	.50	0.00
	MEAN	5.3	1.92	.86	4	2.53	.74	.61
5.	WRITING IN LP	2	3.3	.82	0	3.75	.75	.45
5.1		4	2.13	.64	1	2.91	1.45	.78
	MEAN	3	2.72	.73	.5	3.33	1.10	.62
6.	READING IN LP	2	3.9	.88	0	4.08	.79	.18
6.1		6	2.17	.41	2	2.2	.92	.03
	MEAN	4	3.04	.65	1	3.14	.86	.11
7.	EFF THINKING	3	3.67	.87	2	4.2	.92	.53
7.1		6	2.17	.75	2	2.8	1.03	.63
7.2		8	2	.82	4	2.25	.71	.25
	MEAN	5.7	2.61	.81	2.7	3.08	.89	.47
8.	CREATIVITY	4	3.75	1.04	3	4	1.00	.25
8.1		4	1.38	.52	5	2.57	1.13	1.19
8.2		8	3	0.00	4	2.88	.64	-.12
	MEAN	5.3	2.71	.52	4	3.15	.92	.44
9.	PLURALISM	5	4	1.15	3	4.67	.50	.67
9.1		9	1	0.00	6	2.33	.82	1.33
9.2		10	1	0.00	9	2	1.00	1.00
	MEAN	8	2	.38	6	3	.77	1.00
MEAN OF MEANS		4.6	2.51	.73	2.5	3.01	.88	.50
MEAN (1-9)		2.1	3.39	.94	.9	4.08	.79	.69

HUM ST: MUSIC 10LS-1 N = 19 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	0	3.32	1.06	1	3.61	.70	.29
2. MODES/INQ	1	3	1.08	0	3.53	1.02	.53
3. IMP/KNOW	5	3.36	1.15	0	3.79	.92	.43
4. AESTH/KNOW	3	3.69	1.35	0	4.21	.92	.52
5. WRITING IN LP	2	3.53	1.12	0	3.68	1.00	.15
6. READING IN LP	3	3.75	1.00	0	3.95	1.03	.20
7. EFF THINKING	5	3.57	.76	1	3.61	.85	.04
8. CREATIVITY	4	4.2	1.08	1	4.06	.94	-.14
9. PLURALISM	7	3.33	.89	1	3.94	.94	.61
MEAN (1-9)	3.3	3.53	1.05	.4	3.82	.92	.29

HUM STU: MUSIC 10LS-2 N = 8 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	0	3.75	.89	1	4.57	.79	.82
1.1		1	2	1.15	0	2.63	.92	.63
1.2		2	1.5	.55	1	2.57	.98	1.07
	MEAN	1	2.42	.86	.7	3.26	.90	.84
2.	MODES/INQ	1	3.71	.76	0	3.75	1.04	.04
2.1		1	2.57	1.51	0	2.5	.93	-.07
2.2		1	2.29	.76	1	2.43	1.13	.14
	MEAN	1	2.86	1.01	.3	2.89	1.03	.04
3.	IMP/KNOW	0	3.63	.74	1	3.57	1.62	-.06
3.1		2	1.17	.41	1	1.71	.76	.54
3.2		4	1.25	.50	3	2	1.00	.75
	MEAN	2	2.02	.55	1.7	2.43	1.13	.41
4.	AESTH/KNOW	0	3.75	.89	0	4.25	1.16	.50
4.1		2	2	.89	1	2.43	.98	.43
4.2		2	2	.63	0	2.13	.64	.13
	MEAN	1.3	2.58	.80	.3	2.94	.93	.35
5.	WRITING IN LP	0	3	1.31	0	4.13	.64	1.13
5.1		1	2	.82	0	2.5	.76	.50
	MEAN	.5	2.5	1.07	0	3.32	.70	.82
6.	READING IN LP	0	4	1.20	0	4.5	.76	.50
6.1		1	2.14	.69	0	2.5	.76	.36
	MEAN	.5	3.07	.95	0	3.5	.76	.43
7.	EFF THINKING	0	3.5	1.07	0	3.75	1.04	.25
7.1		1	1.43	.53	1	2.14	.90	.71
7.2		3	2	.71	2	2	.63	0.00
	MEAN	1.3	2.31	.77	1	2.63	.86	.3[illegible]
8.	CREATIVITY	0	3.5	.76	0	4.25	.71	.75
8.1		2	2.5	1.05	0	2.5	1.31	0.00
8.2		1	3.14	.38	0	3.38	.74	.24
	MEAN	1	3.05	.73	0	3.38	.92	.33
9.	PLURALISM	0	2.75	1.28	1	3.86	.90	1.11
9.1		3	1.6	.55	2	2	0.00	.40
9.2		5	1.67	.58	2	2.17	.75	.50
	MEAN	2.7	2.01	.80	1.7	2.68	.55	.67
MEAN OF MEANS		1.3	2.54	.84	.6	3	.86	.47
MEAN (1-9)		.1	3.51	.99	.3	4.07	.96	.56

HUM ST: MUSIC 10LS-1,2,80 N = 5 SHORT

	PRE-SURVEY			POST-SURVEY			DIFFERENCE
	OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1. INTRADISC	1	2.75	1.26	1	3.75	.96	1.00
2. MODES/INQ	1	3.75	.96	0	4	.71	.25
3. IMP/KNOW	3	2.5	.71	1	3.75	.96	1.25
4. AESTH/KNOW	3	2	1.41	1	4.25	.50	2.25
5. WRITING IN LP	2	3	1.00	0	3.8	.84	.80
6. READING IN LP	2	3.33	1.53	0	3.4	.89	.07
7. EFF THINKING	3	2.5	.71	1	3.5	1.29	1.00
8. CREATIVITY	3	3	0.00	0	3.8	1.30	.80
9. PLURALISM	2	2.33	1.53	0	3	.71	.67
MEAN (1-9)	2.2	2.8	1.01	.4	3.69	.91	.90

HUM STU: MUSIC 10LS-80 N = 19 LONG

		PRE-SURVEY			POST-SURVEY			DIFFERENCE
		OMITS	MEAN*	SD	OMITS	MEAN*	SD	BET. MEANS
1.	INTRADISC	3	3.13	1.36	0	4	1.11	.87
1.1		10	2.44	1.13	6	2.15	1.28	-.29
1.2		12	2.43	1.13	8	1.82	1.33	-.61
	MEAN	8.3	2.67	1.21	4.7	2.66	1.24	-.01
2.	MODES/INQ	1	2.94	1.11	0	3.95	.97	1.01
2.1		7	2.83	.94	6	2.15	1.34	-.68
2.2		7	2.75	1.22	7	2	1.21	-.75
	MEAN	5	2.84	1.09	4.3	2.7	1.17	-.14
3.	IMP/KNOW	2	3.24	1.30	0	3.84	1.30	.60
3.1		11	1.25	.46	7	1.75	1.14	.50
3.2		12	1.14	.38	12	1.43	.79	.29
	MEAN	8.3	1.88	.71	6.3	2.34	1.08	.46
4.	AESTH/KNOW	4	2.93	1.44	1	4.06	1.26	1.13
4.1		11	2.38	1.06	9	2.3	1.25	-.08
4.2		13	2.83	1.72	12	2	1.00	-.83
	MEAN	9.3	2.71	1.41	7.3	2.79	1.17	.07
5.	WRITING IN LP	2	3.29	.99	0	3.42	1.26	.13
5.1		11	1.63	1.19	8	1.27	.65	-.36
	MEAN	6.5	2.46	1.09	4	2.35	.95	-.11
6.	READING IN LP	4	3.67	.98	1	4	1.08	.33
6.1		11	1.5	.53	8	1.45	.69	-.05
	MEAN	7.5	2.59	.76	4.5	2.73	.89	.14
7.	EFF THINKING	5	3	.88	2	3.88	1.11	.88
7.1		12	2	.82	11	2.13	1.13	.13
7.2		14	2.2	.84	10	1.67	1.12	-.53
	MEAN	10.3	2.4	.85	7.7	2.56	1.12	.16
8.	CREATIVITY	5	2.93	1.44	2	3.88	1.27	.95
8.1		14	2.8	1.10	11	2.13	1.36	-.67
8.2		12	2.57	.98	9	2.3	.67	-.27
	MEAN	10.3	2.77	1.17	7.3	2.77	1.10	0.00
9.	PLURALISM	4	2.8	1.32	2	4.12	1.22	1.32
9.1		13	2	1.10	11	2.13	.99	.13
9.2		13	2	1.67	11	1.88	1.25	-.12
	MEAN	10	2.27	1.36	8	2.71	1.15	.44
MEAN OF MEANS		8.4	2.51	1.07	6	2.62	1.10	.11
MEAN (1-9)		3.3	3.1	1.20	.9	3.91	1.18	.80

APPENDIX O

LOS MEDANOS COLLEGE SITE VISIT REPORT,

NANCY JO HOY, Ph.D.,

DIVISION CHAIR, SADDLEBACK COMMUNITY COLLEGE

NATIONAL ENDOWMENT OF THE HUMANITIES CONSULTANT

LOS MEDANOS COLLEGE SITE VISIT REPORT

Nancy Jo Hoy, PhD,
Division Chair Saddleback Community College
National Endowment of the Humanities Consultant

On January 6 and 7, 1983 I made my second visit to Los Medanos College. My first visit on November 18, 1982 provided me the opportunity to make initial contacts with a substantial group of faculty and administrators. Having read the supporting materials and gleaned some very positive impressions on my first visit, I arrived in January with a fairly clear impression of what Los Medanos' General Education Program had set out to do. When I say "a fairly clear impression" the circumstances of my coming to Los Medanos were as replacement for a consultant who had already had considerable contact with the program. The unfortunate loss of their consultant had led Los Medanos administrators to contact me, asking me to complete the task.

Los Medanos College is housed in a single building which hugs the terrain, giving an impression of unity and harmony with its surroundings. Classrooms, faculty offices, administrative offices, theater, planetarium and so forth are all part of the same structure. In short, it is difficult to resist the notion of metaphorical architecture which reflects the intellectual structure of the college and an integrated approach to general education.

Los Medanos is a relatively new campus which committed itself from the beginning to an integrated educational program. Its faculty was handpicked from the start, and individuals were selected in part on the basis of strong interdisciplinary leanings. Los Medanos' small size is a significant asset, for its smallness allows it to retain a certain clearly defined character and integrity. Very important also is the presence of President John Carhart, who is both a strong supporter of the general education program and an integral part of the educational process. Considerable appreciation was expressed by faculty for the quality of Los Medanos' administrators, whom they see as educators first and with whom they share a sense of collegiality. Faculty also praised the honesty and forthrightness of the president and his willingness to share what he is thinking, his flexibility and openness and general concern as to what is best for the students.

The goal of my second visit was to observe and comment on the humanities components of Tier One, and to try and assess whether or not the criteria and the tier structure put Los Medanos in the right direction in terms of threading humanities concerns throughout the entire curriculum.

John Naisbitt points out in Megatrends that we are living through a great paradigm shift, i.e., the United States is changing from an industrial to an information society and undergoing dramatic and farreaching cultural shifts. If this is true, what kinds of educational skills should colleges and universities be providing students in order to help them survive intellectually and economically during the transition period in the decades ahead? The answer to this question undoubtedly lies in the direction of inter- or transdisciplinary processes which provide for greater flexibility of thinking, strong critical reasoning and listening skills and highly developed communication skills. The most common concern I heard expressed by both faculty and administrators was: what constitutes an educated person today, and does the Los Medanos General Education Program respond to the above concerns?

The Los Medanos General Education Program is highly ambitious in its intent to integrate what are clearly humanities skills and processes across the entire general education curriculum. Admirable too is the faculty and administration's commitment to the task, and particularly President Carhart's willingness to support his faculty in taking risks, as risk is an inevitable part of innovation and the striving for excellence. Los Medanos faculty and administration have also made a serious commitment to affirmative action, which is reflected in the racial and sexual integration of the faculty, in a thoroughly scrutinized curriculum content and in the choice of pluralism as one of the eight general education criteria.

As a consultant one searches for a certain "feel" or quality which characterizes a given campus. That "feel" at Los Medanos College comes from the sense one has of the college as a learning community. It quickly becomes apparent that everyone from the president on down through the administrative deans, faculty and students is caught up in the process of examining and experiencing the eight general education criteria. Everyone at Los Medanos is committed to the concept - and new people know that.

My schedule both days provided generous amounts of time to sit in on classes in a variety of areas - astronomy, chemistry, mass communications and music - as well as time to talk at length with faculty members teaching in the program. It was a pleasure to listen to astronomer Kate Brooks read Longfellow's description of the Milky Way, or discuss Caroline Herschell's discoveries as we sat in the dark planetarium under a canopy of stars. It was exciting to watch chemistry instructor Mitch Schweikert make nylon as he reflected on Winston Churchill and the problems of the British Air Force during World War II, detailing the various applications of synthetic materials and probing the students to consider the ethical implications of chemical inventions and their various peace and wartime uses. It was enlightening to hear Dick Livingston point out the need to distinguish between what we are able to do with the new mass media technology as opposed to what we should do, and the implicit responsibility of individuals as citizens and consumers. It was a pleasure to listen to Jean Shrader explicate Debussy's Afternoon of a Faun by comparing it to impressionist paintings and relating the music to Mallarme's poetry.

In each class I attended there was considerable discussion on the implications of knowledge and discovery and the nature of the scientific method or the artistic process, all done with considerable grace and ease. Los Medanos faculty rate high for their skills in effective thinking, in the encouragement of ethical inquiry and creativity and for their tolerance of students and encouragement of creative responses (as well as for their aforementioned commitment to pluralism). In all classes I found that faculty were highly adept at encouraging students to be participants, not observers. I came away feeling that students appreciated the learning process and were at ease with the Socratic method.

Friday afternoon I had the opportunity to spend more time with President Carhart, who expressed his pleasure at the success of the general education project so far. It would be more accurate to say that he is both impressed and delighted with what Los Medanos faculty have accomplished, and it would be hard to find a campus where there is more mutual support and admiration among faculty, administration and president than this small and special place. It is, of course, true that no one ever gets too many strokes, and perhaps all those warm feelings need to be more openly communicated. President Carhart said that staff at Los Medanos have high expectations of themselves and one another and that "when you expect a lot of people you tend to get it". In addition the president expressed his desire to see the program permanently institutionalized, saying expressed his desire to see the program permanently institutionalized, saying that unless such an innovative program is institutionalized, it can be quickly lost.

I was surprised to learn during our conversation that Los Medanos is one of three colleges in a district with two larger and more traditional sister campuses and serves a community where 20% of the population have never finished high school (as opposed to 4% in the neighboring campus) and where 65% have completed only high school (as opposed to 65% of the population which have completed four years of college or higher in the neighboring colleges). In this context Los Medanos' goals are even more impressive. President Carhart attributes the college's success in part to the fact that the faculty as a group stretch themselves continually and have consistently high expectations of themselves and of students and that high expectations, like enthusiasm, tend to be contagious.

I was asked whether there might be any "cautions" which would be helpful to Los Medanos staff in the accomplishment of their tasks. I can come up with no cautions, however there were several issues which emerged in discussion with faculty, and reflecting on them here may provide a basis for some helpful discussion.

After several days spent with faculty teaching in the program, I was able to determine three areas of general faculty concern. They can be summarized as follows:

A. "Have I achieved the proper balance between the eight criteria and the content of my own discipline?"

B. "Is it possible to meet all eight criteria at the same level of proficiency?"

C. "Is it possible to design an evaluation tool which accurately measures the success of our efforts?"

I will deal with the above as two rather than three categories, for two really concern the criteria and one concerns evaluation. First, in terms of the criteria, the question centers on the need to meet all the criteria all of the time at the same level of proficiency and whether or not this is possible or even desirable. If you have eight criteria (which is a lot) and a limited amount of time, how do you do all of them without shortchanging quality? If the criteria must be met at all times at the same level of excellence, should one aim for consistency or should one trust the individual faculty member to decide on the appropriate balance? If there is a conflict between discipline content and process criteria, what does one delete?

The problem seems to have two parts, first the issue of too many criteria to do all at an acceptable level of quality all the time, and second, an existing tension between process and content, or between criteria and discipline, or between being too specific or too abstract. My observation is that faculty across the board are doing an excellent job of meeting the criteria and yet because of their expressed concerns I had the impression they are not aware of their own high level of proficiency in doing so; nor are they aware that the very same thing is occurring in their colleague's classrooms. It is as if each is doing the very same dance in a contiguous studio, unable to see from where he or she is positioned, the entire graceful choreography.

It is obvious that certain disciplines lend themselves to certain criteria. If faculty succeed in dealing with less than eight of the criteria in a major way to their own satisfaction (let us say some agreed-upon number) and in a minor way to meet the remaining criteria to their own satisfaction - again, quality is the key here - by the time a student emerges from the third tier he or she will have been exposed to all eight criteria more than adequately. Los Medanos faculty, like excellent faculty everywhere, suffer from the feeling that they must be perfect all the time, a laudable though highly stress-producing expectation. Finding the right balance between process (the majority of the humanities criteria are in fact process criteria) and disciplinary content is probably an intellectual plague which will continue to haunt the faculty as long as the program continues. My suggestion is that faculty should learn to live with it. Whatever the correct balance it will probably vary from instructor to instructor, from discipline to discipline, and from semester to semester - nor should this be different. I wish to suggest that the Los Medanos faculty are doing an excellent job but that they are not sufficiently aware of that fact. Awareness is needed, but not necessarily more definition. Whenever too much structure is overlaid on the process one ends up with atrophy and erosion of creativity and energy. On the other hand there could be agreement reached on some general guidelines, both in terms of quality and quantity.

Regarding evaluation, I heard faculty voice concerns that the current evaluation form is inadequate and does not reflect what is going on. Los Medanos needs time to develop an evaluation instrument for Tier One as well as a second instrument which measures what a student will have learned over two or three years' time. Given the nature of the program, immediate feedback can only provide a part of the picture. I also heard faculty eager for a variety of other kinds of feedback as well, i.e., information from peers as to how they were doing and whether they were adequately meeting the criteria as well as some way of ascertaining whether or not the whole plan was working.

The kinds of evaluation tools which are helpful for administrators and necessary for grants purposes are not necessarily useful or accurate in providing faculty the kinds of feedback they need or want for their own pedagogical purposes. One possibility might be to take the existing document and translate it into English (it is currently written in abstract evaluationese) so that students can understand it. This would provide initial and accurate feedback on a basic level. Also, the current evaluation form could be used specifically for the Tier One courses and a second evaluation tool designed for students who have been through a sequence of Tier One courses as well as through Tiers Two and Three. These two combined would give a much more accurate indication of the success of the program and its impact on students. It would also provide a means of discovering whether or not there is internal program coherence and consistency of process over an extended period of time.

If I as a consultant were able to observe the Los Medanos faculty doing their jobs with sensitivity, skill and enthusiasm, i.e., if by dint of my priviledged position I was able to watch them all doing the dance together, how can faculty gain that same perspective, how can they get a more accurate sense of their own excellence and professionalism? The situation calls for more information in a variety of ways: I would encourage faculty to invite a colleague (or colleagues) into their classrooms (even one visit is of great benefit) and to invite a colleague to come and bring a Tier One class. These are excellent ways of getting positive feedback and support. A key factor in a program like this is getting faculty together to talk. It is a vital ingredient too in keeping teachers intellectually alive. Another suggestion would be a purely social event, perhaps a potluck for all Tier One faculty with time to brainstorm and compare notes.

I also have the impression that students are not completely aware of what the program is trying to accomplish. Perhaps after a sequence of Tier One courses they will make the inevitable connections, but in the interim what about a simple brochure saying, "This is what the program is, here is what we are trying to accomplish, here are the eight criteria and why, and you who are a part of this program are very special." When people feel they are part of something special they tend to perform better, and more information is always better than less information.

In summary, in a world characterized by alienation and anomie Los Medanos stands out as a real educational community with good people at all levels dedicated to and enthusiastic about the job they are doing. I would encourage you to invite colleagues from other colleges to come and observe, participate and share in the excitement. As for myself, I would like to take this opportunity to thank faculty and administrators for tolerating my intrusions into your offices and classrooms and giving generously of your precious time. It was a pleasure working with you and I appreciate having had the opportunity to observe and share and grow from our association.

APPENDIX P

MINUTES OF GENERAL EDUCATION COMMITTEE

MARCH 1, 1983 AND MARCH 8, 1983

MINUTES OF THE GENERAL EDUCATION COMMITTEE

1. The General Education Committee met on Tuesday, March 1, 1983 from 8:30 to 3:30 at St. Mary's College.

   Present were: Case, Williams, Custodio, Booher, Shrader, Zavala, Marino, Rodriquez, G., Mahler, Chin, Schweickert

   Absent were: Rodriquez, C., MacDonald

   Guests were: Collins, Charles C., Baskin

2. Actions:

   Outlines of courses proposed for Tier One were reviewed for satisfaction of criteria and fullfilment of prior conditions. Any conditions for approval were noted and sent forward to authors on course-by-course reports of action by the GEC. General requirements were stipulated. (See attachment).

   The following courses were recommended for designation as Tier One General Education Courses by the votes indicated:

Course		Yes	No	Abstain
BEHSC 5LS	General Anthropology	11	0	0
BEHSC 6LS	Cultural Anthropology	10	0	1
BEHSC 10LS	Functional Aspects of Psychology	11	0	0
BEHSC 15LS	Introduction to Sociology	10	0	1
BEHSC 16LS	Introduction to Social Problems	11	0	0
PHYSC 5LS	Physical Science	10	0	1
PHYSC 15LS	Introduction to Physics	11	0	0
PHYSC 35LS	General College Physics	11	0	0
PHYSC 20L	Introduction to Chemistry	10	0	1
PHYSC 25LS	General College Chemistry	10	0	1
PHYSC 45LS	Introduction to Astronomy	11	0	0
LANGA 30LS	The Nature of Literature	9	2	0
LANGA 35LS	Mass Communication	11	0	0
HUMST 5LS	Humanities - Visual Art	11	0	0
HUMST 10LS	Music Literature	11	0	0
HUMST 40LS	Philosophers of the World	11	0	0
HUMST 41LS	Critical Perspectives	10	0	1
BIOSC 5LS	Health Biology	11	0	0
BIOSC 25LS	Ecology	11	0	0
SOCSC 10LS	Economic View of Society	11	0	0
SOCSC 21LS	Geography	11	0	0
SOCSC 32LS	United States History	11	0	0

The following courses were not reviewed:

BEHSC 11LS	General Psychology
BIOSC 10LS	General Biology
BIOSC 20LS	Principles of Biology
SOCSC 5LS	Social Order and Institutions

3. The General Education Committee will meet next as follows:

Day/Date: Tuesday, March 8, 1983
Time: 12:30 - 1:30
Place: Room 409

Agenda:
1. Review and vote on the following courses:

   BEHSC 11LS
   BIOSC 10LS
   BIOSC 20LS

2. Future concerns and a social activity

Submitted by

Chester Case
Chairperson

CC:th
3/9/83

GENERAL REQUIREMENTS

The General Education Committee wants all course outlines to meet the following general requirements. Most course outlines already meet these requirements in whole or part in various ways. Course authors should review their outlines on these requirements:

1. **Articulation statement:** review and update with the appropriate Dean
2. **Required text(s):** if a text or texts are required for the course, it or they should be named.
3. **Reading/writing assessment and referral:** the reading/writing assessment is covered in various forms in almost all course outlines. The essential follow-through on assessment, referral, is infrequently stated. For the college commitment to reading/writing assessment and provision for assistance in the general education curriculum to be clear and visible, a statement along the lines of the following should be in the section "Course Policies":

   Reading/writing assessment. Exercises to assess student's reading and writing abilities will be adminstered at an appropriate time during the first weeks of class. Where appropriate, students will be referred for assistance by the class tutor or other resources.

3/10/83

MINUTES OF THE GENERAL EDUCATION COMMITTEE

1. The General Education Committee met on Tuesday, March 8, 1983 from 12:30 to 2:30 at Los Medanos College, Room 409.
   Present were: Case, Williams, Custodio, Booher, Shrader, Zavala, Marino, Rodriquez, C., Rodriquez, G., Mahler, Chin, Schweickert.

2. Actions:

   The following courses were recommended for designation as Tier I General Education Courses by the votes indicated:

Course	Yes	No	Abstain
Biosci 20LS: Principles of Biology	11	0	0
Biosci 10LS: General Biology	11	0	0
Biosci 11LS: General Psychology	9	0	0

APPENDIX Q

SAMPLE OF COURSE OUTLINES

Language Arts 35LS	Mass Communication
Music 10LS	Music Literature
Physical Science 45LS	Introduction to Astronomy
Social Science 32LS	United States History

COURSE OUTLINE

TIER I GENERAL EDUCATION COURSE

Course Title: Music Literature

Course Author(s): Stan Smith, Jean Shrader, Larry Howard

1. CATALOG DESCRIPTION

Title of Course:	Music Literature
Course Number:	Music 10LS
Unit Value:	3 units
Mode of Instruction:	Lecture

Brief Description of the Course:

An intradisciplinary course providing an overview of the creative process with a focus on music. The course develops an aural analysis of music from many cultures and from past to present-day forms of musical creativity; it examines music as a reflection of the beliefs, social conditions and temper of the times. Sophistication in listening will be developed with attention to musical design, forms, style, instrumentation, and the derivation of increased pleasure from this art form. The course will allow the opportunity for creative problem solving through exercises and hands-on experiences, and will teach observation and critical skills through attendance at and evaluation of contemporary exhibits and performances.

Articulation Statement:

LMC Gen. Ed.
Transfer: UC, CSUC (Gen. Ed. area C)

2. OVERVIEW and RATIONALE

Overview

The Music Literature course introduces to the student the basic nature of Art and the artistic mode of inquiry, the creative process. The student will receive an introduction to elements of music such as melody, harmony, rhythm, form and texture through lecture/discussion/tests and practical exercises in creativity. Along with examining how Art is created, students will investigate the uses and aesthetics of Art. Aesthetics, ethics, social implications, psychological influences and cultural contributions in Art will be critically considered. World music (Art) will be surveyed with an emphasis on western music history. Students will be guided in listening activities and will be required to attend five live Art presentations (plays, galleries, concerts). A written critique on each presentation plus other class writings and essay tests will offer varied writing experiences.

Rationale

Because Art is universal and since experience and knowledge in Art is enriching and enhances the quality of human life, all students should have the opportunity to experience and learn about Art on a level that can be comprehended with little or no formal background. All students should be allowed to explore how we communicate (express) through music, dance, drama and the visual arts and to become aware of some of the social, cultural, technical, ethical, aesthetic and historical aspects of Art.

3.1 Course Content Goal

The intent of this course is to introduce the following course content to the learner.

*I. The Creative Process (Film - "Why Man Creates")

A. Collection: the raw data of experience

1. Where do ideas come from?
2. Perception
3. Cultural perspective
4. Creativity
5. Art as information

B. Selection: the basic elements

1. Components of art

    a. Communication
    b. Composition
    c. Perspective

2. Structural ingredients

    a. Medium
    b. Line
    c. Texture
    d. Color
    e. Harmony
    f. Rhythm

3. The artist's personal attributes: the creative personality

    a. Craftsmanship
    b. Sensitivity
    c. Originality

C. Process/product

1. Music
2. Painting
3. Graphic art
4. Dance
5. Drama
6. Film
7. Literature

D. Evaluation

1. Characteristics cf great art
2. Influences on evaluation of art

*For a more detailed outline of this portion of the course content, see Attachment 1 at end of this document.

3.1 Course Content Goal, continued

3. Objectives for the student as an evaluator of art
4. Specific requirements
    a. Attend at least one musical performance
    b. Attend at least one dramatic performance
    c. Attend at least one art exhibit
    d. Attend a total of five performance and/or art exhibits and write a critical evaluation on each; two of the performances or exhibits must be at Los Medanos College; one of the performances or exhibits must be an off-campus event.

II. Learning about music through effective reading and writing

A. How to read assignments

1. Preview
    a. Develop questions
    b. Sum up past knowledge
    c. Get as much substance out of the title as possible
    d. Read sub-headings then try to recall them without looking
2. Read the material
3. Review
    a. List words, phrases, sub-headings, key concepts
    b. Review the goal or purpose in reading the material

B. How to take effective class notes

C. How to write effectively for class written assignments and events

1. Journals
2. Essay tests
3. Research papers
    a. Footnotes
    b. Bibliography

III. Music of other cultures

A. African music

1. Influence in the western world (Cuba, Puerto Rico)
2. Influence on jazz

B. Asian music

1. Indian
2. Indonesian
3. Far Eastern
4. Latin American music
5. American Indian music

3.1 Course Content Goal, continued

IV. Capsule history of western music

- A. Ancient
    - 1. Art in mankind's rituals
    - 2. Legacy of the Greeks, Romans, and Hebrew-Christian tradition
    - 3. Chant (Ambrosian, Gregorian)
- B. Medieval (1100 - 1450)
    - 1. Introduction
        - a. Historical background
        - b. Literature, architecture, painting, feudalism, Magna Carta, etc.
    - 2. Sacred polyphony
    - 3. Secular monody polyphony (Troubadours)
- C. Renaissance (1450 - 1600)
    - 1. Introduction
        - a. Historical background (Gutenburg press, Reformation, etc.)
        - b. Literature, sculpture, painting, fresco, philosophy
    - 2. Polyphony
        - a. Master composers and works (Palestrina)
    - 3. Madrigal
        - a. Examples
    - 4. Instruments
- D. Baroque (1600 - 1750)
    - 1. Introduction
        - a. Historical background and art of the period
    - 2. Musical style
    - 3. Musical forms (concerto grosso, fugue, suite, opera, oratorio, etc.)
    - 4. Biography of main composers
        - a. Bach (Videotape - "The Joy of Bach")
        - b. Handel
- E. Classical (The Age of Reason) (1750-ca. 1825)
    - 1. Introduction
        - a. Historical background and art of the period
    - 2. Musical style
    - 3. Musical forms (sonata-allegro form, symphony)
    - 4. Master composers and works (Haydn, Mozart)

3.1 Course Content Goal, continued

- F. Romantic (ca. 1825 - ca. 1900)
  - 1. Introduction
    - a. Historical background and art of the period
  - 2. Musical style
  - 3. Master composers and examples of works (from Beethoven on)
- G. Twentieth-century (ca. 1900 -)
  - 1. Introduction
    - a. Historical background and art of the period
    - b. Influences of Freud, Einstein, existentialism, etc.
  - 2. Musical styles (impressionism, expressionism, primitivism, neo-classicism, etc.) and composers
  - 3. New forms (duodecuple, serial, electronic, mathematical, chance) and composers
  - 4. Importance of the arts in our technological age

ATTACHMENT 1

Step One in the Artistic Mode of Inquiry.

I. Collection

  A. Where do ideas come from?

    1. Natural environment
    2. Constructed elements in the environment
    3. History and culture Heritage
    4. Magic

  B. Perception

    1. What's really out there? (Metaphysics)
    2. How do we know? (epistemology)
    3. Personal perceptions based on the accumulation of raw data and past personal experiences

  C. Cultural Perspective

    1. Being taught what to see/hear
    2. Conditioned response
    3. The invisible/silent world

  D. Creativity

    1. Looking/listening to one thing but seeing/hearing something else
    2. Fooling around
    3. Willing suspension of disbelief or ability to believe the "unreal."
    4. Putting together things that haven't been put together before
    5. Utilizing personal experience

  E. Art is information

    1. Communication, both personal and cultural
    2. The audience as part of the process

1. Step two in the Artistic Mode of Inquiry: Selection

I. The Basic Elements with which artists find bounds.

A. Communication is one of the basic reasons and motivations for art.
B. Composition - there must be an art work (composition) through which communication can occur.
C. Perspective - there is a frame of reference for both the artist and the audience. Art does not come out of a vacuum but comes out of the way we perceive things - cultural, ethical, ethnic, philosophical, psychological, physical perspectives.

II. Structural ingredients of Art with which the artist works.

A.

MUSIC	GRAPHIC ART	SCULPTURE	DANCE	DRAMA	FILM
Sound	Light	Medium (wood)	Movement to music in space	Action	Light and Motion
Melody (line)	Line	Line (shape in space)	Melody and spacial line	Line/dialogue	Line (in frame and from frame to fram
Form	Form (design)	Form (shape)	Form (shape in motion choreography)	Plot	Plot/motion
Texture (thick/thin)	Texture (rough/ smooth)	Texture (rough/smooth)	Solo/group	Solo/group (texture of light & sets)	Rough/smooth/thick thin/dark/light
Tone color (timbre)	Color	Color	Color (costume, lights, timbre)	Color (costume/ lights)	Color (b/w & light dark, costume/ligh
Harmony	Blend (color, line, shape)	Blend (color, line, shape, balance)	Harmony (music, rhythm, motion, space, color)	Harmony (characterization, blend of col motion, tempo, sets, props, makeup, costumes)	
Rhythm (beat in time, tempo)	Rhythm (abstract motion)	Rhythm abstract motion)	Rhythm (beat tempo)	Rhythm (speed, beat)	Rhythm (slow motio tempo, beat)

III. The Artist's personal attributes - who can do art and at what level of mastery (composer, performer, painter, dancer, sculptor, actor, director)?

A. Craftsmanship, pay your dues (technical training), talent, practice.
B. Sensitivity - Awareness, emotion, sensual accuity (good ears, eyes, hands, feet,spacial perception.
C. Originality - experimentation, accident, avant garde, control, functional purpose.

Step four in the Mode of Inquiry

EVALUATION OF THE ART PRODUCT

1. Characteristics of great art

    a. Must express universal truths that shed light on us and our experience
    b. Shows new relationships among the elements
    c. Simplicity
    d. Economy of means
    e. Unity
    f. Exhibits craftsmanship - mastery and control of the elements
    g. Integrity of materials
    h. Agelessness
    i. Durability
    j. Bears repeated encounters
    k. Concern for humanity
    l. Originality
    m. Influential
    n. Communicates to many
    o. Produces an emotional response

2. Influences on evaluation of art

    a. Previous experience with the art form (our "taste")
    b. Exposure to various styles and art forms. (See cartoon)
    c. Education - a set of skills which enables us to effectively perceive the art product
    d. Perception and interpretation of the art product
    e. Our memory of what occurred (important in music and drama)
    f. The reaction of others (the audience)
    g. Cultural background
    h. Age
    i. The purpose of the art product (functional or formal; utilitarian or aesthetic)

3. Objectives for the student as evaluator of art

    a. Become aware of personal past experiences with art and how these affect your "taste"
    b. Become equipped with a set of skills to effectively perceive and evaluate art
    c. Become exposed to a variety of styles of art
    d. Become aware of the various styles, how they differ, and how to evaluate each in its own category
    e. Become aware of functional (utilitarian) vs. formal (aesthetic) art forms
    f. Become aware of how age and cultural background influence our evaluation of art
    g. Attend or experience various art forms and write an evaluation of each

Step three in the Mode of Inquiry

Process/Product

1. Sculpture
2. Painting
3. Graphic Art
4. Music
5. Dance
6. Drama
7. Film
8. Literature

The report should include:

1. Printed program (if one available)
2. A brief description of each work
3. Comment on the notable features of the work (incorporating various elements of the particular art)
4. Personal evaluation of the art work

4. Specific requirements
   a. Attend at least one musical performance (concert or recital) and write an evaluation of it
   b. Attend at least one dramatic performance (play, musical comedy, opera) and write an evaluation of it
   c. Attend at least one art gallery showing and write an evaluation of it
   d. Attend a total of five (5) performances or art exhibits, two (2) of which must be at Los Medanos College

3.2 Criteria Related Goals: Criterion: Intradisciplinary

Criterion stated in goal form: To Teach the Intradisciplinary Elements of the Intradisciplinary Family of Courses

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. Intends to show that the performing and visual arts (music, painting, sculpture, drama, dance, cinema, etc.) are produced by people for people with the purpose of communicating.	1. The learner will compare and contrast a variety of styles of music and art and will demonstrate an acceptance of music and art as being a valid and sincere expression of human beings.	1. I. B.1	1a. Lecture/Exam. b. Audio and audio-visual presentations c. Writing reactions to musical and other artistic events d. Group discussion
2. Intends to show that the purpose of music and the other arts is functional or aesthetic.	2. The learner will analyze and evaluate the uses of music and art in the spectrum of functional through aesthetic.	2. I. D.2	2. Students list various situations where music and the other arts occur and compare and contrast these in group discussion.
3. Intends to show that all arts share the same creative process.	3. The learner will demonstrate an understanding of the commonalities of the creative process in the various disciplines - music, art, drama, etc.	3. I.	3a. Lecture/Exam b. Demonstration through comparative analysis.
4. Intends to show that art is a reflection of the human condition.	4. The learner will be able to discuss relationships between the musical style and the culture from which it evolved, relating the arts to each other and to other societal and cultural conditions.	4. III. A, B IV. A. 1 IV. B. 1a IV. C. 1a IV. D. 1a	4a. In-class writing exercises. b. Group discussion c. Lecture

OTHER:

3.2 Criteria Related Goals: Criterion: Modes of Inquiry

Criterion stated in goal form: To Teach the Mode(s) of Inquiry Indigenous to the Discipline

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. Intends to familiarize the learner with the creative process (collection, selection, product/ process, evaluation) found in the arts (music, art, drama, dance, cinema, etc.)	1a. The learner will collect raw data (sounds)	1. I.	1a. Experiental exerci such as small grou composing with ori sound sources.
	1b. The learner will select musical elements such as melody, rhythm, harmony, texture, timbre, to be used in making music.		1b. Lecture and media presentations.
	1c. The learner will analyze a variety of forms and styles in the arts.		1c. Lecture and media presentations.
	1d. The learner will examine craftsmanship in the production of the arts.		1d. Lecture and media presentations.
	1e. The learner will examine and report on the traditional approaches to evaluation of music and the other arts.		1e. Lecture and in-class writing exercises.
	1f. The learner will write personal evaluations of art works.		1f. The learner will attend five art events (concerts, plays, art exhibits, etc.) and write personal evaluations of them.

OTHER:

3.2 Criteria Related Goals: Criterion: Aesthetics of Knowledge

Criterion stated in goal form: To Teach About the Aesthetic Qualities of the Knowledge of the Discipline

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. Intends to familiarize the learner with the emotional aspects, variety, beauty, profundity, expressiveness, and subtlety in music and the other arts.	1. The learner will be exposed to a variety of musical styles and will be shown that many people, and potentially the student him/herself, derive increased pleasure and respect from listening to or participating in music.	This is a main thrust in this course. See the entire course outline.	1a. Lecture b. Media presentations c. Experiencing art works, performances, and displays in class d. Teacher as role model

OTHER:

3.2 Criteria Related Goals: Criterion: Implications of Knowledge

Criterion stated in goal form: To Explore These Implications of the Knowledge of the Discipline: Values, Ethics and Future

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. Intends to demonstrate to the learner that Art is a reflection of culture and its changing values	1. The learner will be able to give specific examples of art forms and how these forms relate to the culture of which they are manifest (ethno-music and period music)	1. II. III.	1. Essay questions on exam
2. Intends to provide a basis for establishing a personal sense of value in Art.	2. The learner will evaluate art critically.	2. I. D. 3 I. D. 4	2a. Lecture b. In-class practice c. Student's written observations.
3. Intends to show that through the arts a human perspective on life can be sustained amidst the technological push and other dehumanizing elements of our contemporary society.	3. The learner will examine art and the role of artists in comprehending the human condition.	3. IV. G. 4	3a. Lecture b. Discussion c. Attending art event

OTHER:

3.2 Criteria Related Goals: Criterion: Reading and Writing in the Learning Process

Criterion stated in goal form: To Provide Opportunities for Learners to Develop Higher Cognitive Skills Through Reading and Writing

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Ccurse Outline)	INSTRUCTIONAL Procedures/Materials
1. Intends to provide the learner with assigned reading material related to music.	1. The learner will be given the opportunity to improve skills in reading through assignments and instruction in how to read.	1. II. A	1a. Lecture b. Demonstration c. Text - (optional) *The Understanding of Music* by Hoffer. d. Various handouts and assigned readings in the reserve and reference sections of the Learning Center
2. Intends to provide the learner with in-class writing assignments.	2. The learner will be given the opportunity to improve skills in writing through various writing assignments and instruction in how to approach various situations.	2. II. B II. C	2a. Lecture b. In-class practice in: 1. taking class notes 2. summarizing class presentation 3. writing in journals 4. writing critiques of live art presentations 5. writing essay exam questions

3.2 Criteria Related Goals: Criterion: Reading and Writing

Criterion stated in goal form: To Provide Opportunities for Learners to Develop Higher Cognitive Skills Through Reading and Writing

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
3. Intends to present techniques for and provide the student with opportunities for writing critical reviews of art works and performances.	3. The learner will write critical observations and interpretations of various art forms.	3. I. D. 4.d	3a. Lecture on how to write a critique or report of a performance b. Reading and discussion of handout "How Do I Write a Report When I'm Supposed To Be Listening." c. In-class practice on writing critiques. d. Five written critique required after attendance at live art presentations.
4. Intends to develop students' reading and writing skills.	4a. The learner will know his/her reading and writing skills compared to the levels expected for successful course completion. b. The learner will understand the value and availability of tutorial assistance.	4. II.	4a. Administer reading an writing assessment. b. Introduce students to tutorial help and periodically remind them to avail themselves of this assistance.

OTHER:

3.2 Criteria Related Goals: Criterion: Critical and Effective Thinking

Criterion stated in goal form: To Provide Opportunities for Learners to Enhance The Effectiveness in Thinking

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. Intends to provide an opportunity for creative problem solving through the mode of inquiry used by artists.	1. The learner will tackle specific problems utilizing creative processes presented in class.	1. I. A. 2 I. A. 3 I. A. 4	1. Assignments in creati problem solving and conceptual block busti such as, Why does man create? What is music What is a masterwork? What is the affect of music - morally, soci logically, biologicall spiritually, psychologically.
2. Intends to provide an opportunity for critical evaluation of art works and performances.	2. The learner will write five critiques of performances which demonstrate a personal evaluation of the art works.	2. I. D. 3 I. D. 4	

OTHER:

3.2 Criteria Related Goals: Criterion: Creativity

Criterion stated in goal form: To Introduce to Learners Creative Process and Examples of Human Creativity

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. Intends to show the creative process used by artists.	1. The learner will be able to outline the steps of the creative process and give an example of each step.	1. I.	1a. Lecture b. Experiential exercise 1. students bring interesting sounds to class as an exa of the "collection' step 2. Students prepare a perform a compositi using the sounds t brought to class a their knowledge of the creative proce to illustrate the "selection" step a the "process" of putting it together
2. Intends to show a variety of creative examples from western and non-western cultures.	2. The learner will be exposed to music from a variety of cultures and historical periods.	2. III. IV.	2a. Lecture b. Media presentations

OTHER:

3.2 Criteria Related Goals: Criterion: Pluralism

Criterion stated in goal form: To Encourage the Learner to Consider the Variety of Perspectives, Experiences and Persuasions that have an Impace on Society

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. Intends to present examples of art forms from non-western as well as western-European cultures.	1. The learner will be able to identify art forms and styles from various periods and and cultures.	1. III. IV. I. A. 3	1a. Lecture b. In-class practice
2. Intends to look at the role of musicians in various cultures and historical periods.	2. The learner will compare/contrast the different roles musicians are assigned in various cultures and times.	2. III. IV.	2a. Lecture b. Essay tests c. Ethnomusic demonstrations d. Historical research
3. Intends to provide the learner with an opportunity for self-directed enrichment project.	3. The learner will select a topic and do a research paper or a project (live, taped, videotaped, filmed or written) related to some aspect of music.	3. See entire course outline	3. Student projects

OTHER:

4. Texts and Other Instructional Materials

Optional purchase by student - *The Understanding of Music*, fourth edition by Charles R. Hoffer (Wadsworth Publishing Company, Belmont, California)

Film - *Why Man Creates*

Videotape - *The Joy of Bach*

5. Evaluation and Grading Plans

EVALUATION PLAN

The student's achievement of the objectives stated for this course will be evaluated as follows:

1. Knowledge of the course content will be evaluated by the level of performance on unit exams and the final exam which will include essay questions as well as objective test questions.
2. Knowledge of the mode of inquiry (the creative process) and the intradisciplinary nature of the arts will be assessed by the student's performance on examination essay questions.
3. Awareness of the aesthetics and implications of music as well as the student's ability to think critically will be evaluated by the written critiques done by the student after attendance at five live art productions (concerts, plays, art exhibits).
4. Knowledge of how creativity is exemplified in music throughout history and in various cultures will be assessed on unit and final exams as well as in the student's self-directed enrichment project (research paper; preparation of a tape, videotape or film; live presentation) on a topic related to some aspect of music.

GRADING PLAN:

Examinations - 60%

Written critiques of art presentations - 20%

Research paper or project - 20%

6. Course Policies

Attendance at five (5) live performances or exhibits outside of class time is required of all students taking this course.

All students will participate in a reading and writing assessment near the beginning of the course and, when appropriate, will be strongly encouraged to seek tutorial help.

COURSE OUTLINE

TIER I GENERAL EDUCATION COURSE

Course Title: Mass Communication

Course Author(s): Dick Livingston

1. CATALOG DESCRIPTION

Title of Course:	Mass Communication
Course Number:	Language Arts 35 (previously Journalism 5T)
Unit Value:	3 units
Mode of Instruction:	Lecture/Seminar

Brief Description of the Course:

Designed to provide the student information on the origins, development and present role of the major mass media: magazines, newspapers, radio, television and cinema. Course explores current and future trends in mass communication and issues and ethics involved with the mass media.

Articulation Statement:

Meets LMC's general education requirement in Language Arts.
Transfers to UC, CSUC (Gen. Ed. area C)

2. OVERVIEW and RATIONALE

Overview

Mass Communication is a general education course designed to improve students' ability to "consume" modern mass media wisely. The course, designed for the typical student (not necessarily journalism or communication majors), relies extensively on direct media experience, in addition to more traditional classroom methods. Mass Communication is a Language Arts GE course, related to the other option, literature.

Major goals and objectives include: introduction to communication theory and its relationship to mass media; relationship of media form and function; media as the "literature of the 20th century"; evolution of the mass media in the U.S.; trends toward media specialization; evaluation of the media's information role; cultural pluralism and the mass media; media role in formation and transmission of popular culture; criteria for evaluating the mass media; media as big business; the First Amendment and various conflicting rights; economics of the mass media; role and influence of advertising; various media-related ethical issues; the future of the mass media. "Experiential learning" through direct media exposure is used to help students achieve the objectives.

Rationale

Americans are "media freaks" - the typical American adult is now directly exposed to the mass media 50 hours each week. That's quite a habit. Although the media pervade our daily lives, most people are relatively unaware of this "invisible environment" and its impact on us. Our habits, daily routines, perceptions of ourselves, society and the world - all are influenced significantly by mass communication. Information flows through the mass media in vast quantities; it is difficult to sort out and separate the worthwhile from the worthless, the truths from the untruths and half truths. But the range of freedoms and the quality of life in this society depend to a considerable degree on the alternatives we select. This course will help students to choose wisely and become aware of the forms and impact of the mass media. The power of language has been vastly increased by the mass media; for many Americans, media content has become their prime exposure to literature. It is therefore appropriate to study mass communication in Language Arts.

The course presents the "content" of Mass Communication and teaches the criteria of LMC's general education program:

- The intradisciplinary relationship of mass communication to the language arts.
- The modes of inquiry of mass communication as one of the language arts.
- Aesthetics of language arts as presented in the mass media.
- Ethics and values issues of mass communication.
- Reading/writing skills; analysis of media effects on those skills.
- Critical and effective thinking.
- Creativity in the mass media.
- Pluralism as reflected in the media.

A well-educated person in the last two decades of the 20th century needs to understand some of the complexities of the mass media which pervade our daily lives.

3.1 Course Content Goal

The intent of this course is to introduce the following course content to the learner.

I. Introductory Concepts

- a. Communication theory as reflected in mass media; intradisciplinary concepts.
- b. Pervasive influence of mass communication in modern America
- c. Four major media functions - information processing, opinion formation, economic function, entertainment; critical evaluation.
- d. Brief introduction of GE criteria as reflected in mass media.

II. Evolution of the Mass Media (history)

- a. Early concepts of freedom of the press; ethics.
- b. Press in the 1800s; changes as a reflection of societal changes, technology, evolution toward big business, increase in media power and influence
- c. Yellow journalism (Hearst, Pulitzer); Spanish-American War; ethics
- d. The Muckrakers, then and now; ethics.
- e. Press coverage of the two world wars; public's right to know vs. national security issue; ethical implications.
- f. Early days of radio, television; increasing impact of broadcasting

III. Print Media: Magazines

- a. Changing magazines: trend from mass to specialized; implications; demographics and profits; pluralism and implications.
- b. The "opinionmakers" - role of modern news magazines; biased, slanted coverage; power of the medium; ethics.

IV. Print Media: Newspapers

- a. What's news? Journalistic mode of inquiry.
- b. Strengths/weaknesses of daily newspapers
- c. Newspaper industry today (chain store journalism, decline in competition, move toward soft news, economic realities, readership patterns, etc.); ethics
- d. How the news gets into print; technological change; intradisciplinary concepts and inquiry.
- e. Bias in news coverage; ethical implications.
- f. Minority press; pluralism.
- g. Underground press; rise, fall - implications
- h. Development of criteria to evaluate newspapers; application to Bay Area papers; inquiry mode.
- i. Role of community newspapers (usually local editor as guest speaker)

3.1 Course Content Goal, continued

V. Electronic Media: Radio

a. Changes in radio in 50s: influence of TV, rise of DJ format, payola scandal, radio's role in shaping popular culture, ethics
b. Status of radio today: fragmentation (format, sound), FM revolution, minority radio; pluralism.
c. Student-designed radio station exercise involving critical thinking and creativity.

VI. Electronic Media: Television

a. Pervasive influence of TV; feelings about the medium; some "expert" opinions
b. Television as "popular culture"; literary/media analysis of television; application through written TV review; aesthetics.
c. Organization of television industry; form/function; format
d. TV as big business; ratings; effect on programming; ethics
e. Influence of television on children: kudos and criticisms; ethics; what could/should be done
f. Television news coverage: strengths and weaknesses; sensationalism; alternatives
g. Television's influence on the political process; ethics.
h. Three major criticisms: violence, sexism, racism; ethical implications and pluralism.
i. Public television as an alternative; other alternatives and technological change

VII. Motion Pictures

a. Status of movie industry today; creativity and aesthetics
b. Film censorship and pornography; conflicting rights and ethical analysis

VIII. Government/Media Issues

a. Major government/press conflicts; limits on freedom of the press; ethics.
b. Conflict: public's right to know vs. government's need to protect national security; ethics.
c. Case study in conflict: Watergate
d. Conflicting rights: free press vs. fair trial; critical analysis of solutions.
e. Source protection dilemma (ethical analysis included in each issue)

IX. Economics of the Mass Media

a. Media ownership patterns: move toward concentration; implications and ethics
b. Advertising; strengths and weaknesses; manipulation; creative and aesthetic aspects; role of language; formation of popular culture; ethics; what can be done.
c. Access to channels of mass communication; critical analysis.

X. The Future

a. Application of concepts to future; technology; control (individual and societal); implications.

3.2 Criteria Related Goals: Criterion: Intradisciplinary

Criterion stated in goal form: To Teach the Intradisciplinary Elements of the Intradisciplinary Family of Courses

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. Develop an appreciation and understanding of the functions and power of language.	1. To define mass communication as a form combining aesthetics and language.	I. a,b,c III. b IV. e	Lecture/discussion. Various media exposure assignments, such as TV review, ad critique, news bias exercise.
2. Comprehend basic communication processes.	2a. Define sender, receiver, encode, decode, feedback. b. Explain the process of communication using these terms.	I. a, c	
3. Understand the relationship between form and function.	3a. Define form and function b. Explore the relationships between form and function.	I. a,c II. b,f III. a IV. d V. a,b VI. c IX. c X. a	

OTHER:

3.2 Criteria Related Goals: Criterion: Modes of Inquiry

Criterion stated in goal form: To Teach the mode(s) of Inquiry Indigenous to the Discipline

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. Introduce students to the following key modes of inquiry in language arts: a. literary/media analysis	1a. Identify the key concepts used to discuss media content. Demonstrate use of these concepts in discussion of media content.	I. c II. f IV. b,h VI. b	
b. literary/media synthesis	b. Discuss the impact and significance of specific media content and relationships between/among media forms.	Throughout, especially: I. c II. c,d III. a VI. a,b	
c. literary/media analysis	c. Understand the subjective nature of evaluative criteria; be aware of diversity of critical perspectives; develop a personal, defensible critical perspective.	IV. a,b,h V. c VI. a,b VII. a	
2. Introduce students to the key mode of inquiry of inquiry of journalism/mass communication: information processing.	2. Experience, describe and give examples of the media's information gathering, selection and reporting processes.	I. a,c III. b IV. a,d VI. f IX. c	Reading, lecture/discussion on "What's News?" and bias in news coverage.

OTHER:

3.2 Criteria Related Goals: Criterion: Modes of Inquiry

Criterion stated in goal form: To Teach the mode(s) of Inquiry Indigenous to the Discipline

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. Introduce students to the following key modes of inquiry in language arts: a. literary/media analysis	1a. Identify the key concepts used to discuss media content. Demonstrate use of these concepts in discussion of media content.	I. c II. f IV. b,h VI. b	
b. literary/media synthesis	b. Discuss the impact and significance of specific media content and relationships between/among media forms.	Throughout, especially: I. c II. c,d III. a VI. a,b	
c. literary/media analysis	c. Understand the subjective nature of evaluative criteria; be aware of diversity of critical perspectives; develop a personal, defensible critical perspective.	IV. a,b,h V. c VI. a,b VII. a	
2. Introduce students to the key mode of inquiry of inquiry of journalism/mass communication: information processing.	2. Experience, describe and give examples of the media's information gathering, selection and reporting processes.	I. a,c III. b IV. a,d VI. f IX. c	Reading, lecture/discussion on "What's News?" and bias in news coverage.

OTHER:

3.2 Criteria Related Goals: Criterion: Aesthetics of Knowledge

Criterion stated in goal form: To Teach About the Aesthetic Qualities of the Knowledge of the Discipline

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
To examine the aesthetic qualities of the mass media.	Describe and explain the role of aesthetics of the mass media.	I. a, c III. b IV. h V. a VI. b IX. b	Lecture/Discussion Readings; writing assignment, such as TV review, advertising critique.
	Develop and apply criteria in written form for evaluating media aesthetics.	IV. h V. c VI. b IX. b	
	Experience some of the aesthetic aspects of mass communication.	Throughout course	Films, such as "Good-bye, Billy" and "Sixty-second Spot" Readings

OTHER:

3.2 Criteria Related Goals: Criterion: Implications of Knowledge

Criterion stated in goal form: To Explore These Implications of the Knowledge of the Discipline: Values, Ethics and Future

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
Present some of the values/ ethics issues of mass communication.	Describe and evaluate complex mass communication ethical issues; arrive at own conclusions, based on values.	II. a, c, d, e III. b IV. c, e, f, h V. a VI. a, b, d, e, f, g, h VII. b VIII. a-e XI. a, b, c	Lecture/Discussion Small groups; Writing exercises; Films, such as "Mightier Than the Sword," "Electric Flag," "Free Press vs. Fair Trial," "Business of Newspapers," and "Media Massaging the Mind;" Readings.
Look at the future of the media, based on present situation and trends.	Apply present situation and trends to future of mass media.	X. a	Lecture/Discussion; Film, such as "Media Massaging the Mind."

OTHER:

3.2 Criteria Related Goals: Criterion: Reading and Writing in the Learning Process

Criterion stated in goal form: To Provide Opportunities for Learners to Develop Higher Cognitive Skills Through Reading and Writing

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
Provide opportunities for learners to develop higher cognitive skills through reading and writing about mass communication/media.	Read and understand text and "typical" media excerpts.	Throughout course	Reading assignments; text, articles.
	Write "college level" short papers and essay exams.	"	Reaction papers; Short papers (take home, in-class); Essay questions on all unit exams and final.
	Describe relationship of reading, writing to the communication process.	I. a	Reading, lecture
	Analyze effects of media on reading/writing skills.	I. a II. b IV. c VI. b, e	Reading, lecture, discussion

OTHER:

3.2 Criteria Related Goals: Criterion: Critical and Effective Thinking

Criterion stated in goal form: To Provide Opportunities for Learners to Enhance Their Effectiveness in Thinking

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
Provide opportunities for learners to enhance their effectiveness in critical and effective thinking by studying mass media and related issues.	Develop and apply criteria for critically evaluating mass media performance.	I. c III. a, b IV. b, e, h V. a, b, c VI. a, b, d, e, f, g, h	Discussion; reading; lecture; media exposure exercise, such as TV sexism/racism; writing (for ex., ad critique and/or reaction to ethical dilemma.)
	Understand, evaluate and arrive at a conclusion about media issues; report conclusions clearly (verbal, written) Similar to approach used in HST 2LS.)	II. c, d, e VI. h VII. b VIII. a, b, c, d, e IX. a, b, c	Same as above

OTHER:

3.2 Criteria Related Goals: Criterion: Creativity

Criterion stated in goal form: To Introduce to Learners Creative Processes and Examples of Human Creativity

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
Introduce learners to creative processes and examples of human creativity as reflected by the mass media.	Understand, experience and appreciate human creativity in the mass media.	I. c II. f III. a IV. b, c V. a VI. a, b, c, d, e VI. 1 VII. a, b IX. b	Films, such as "Sixty-second Spot;" readings; discussion; lecture; TV viewing exercise and written review; ad critique.

OTHER:

3.2 Criteria Related Goals: Criterion: Pluralism

Criterion stated in goal form: To Encourage the Learner to Consider the Variety of Perspectives, Experiences and Persuasions that have an Impact on Society

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
Encourage the learner to consider the variety of perspectives, experiences and persuasions in American society as reflected in the mass media.	Discuss and evaluate various issues involving women and the mass media.	III. a IV. c VI. h VII. b IX. b	Readings; lecture, discussion on minorities in journalism and role of minority press; paper on TV racism/sexism; discussion of sexism in advertising; ad critique; discussion of sexism in films and relationship to issue of pornography
	Describe and evaluate various issues involving various ethnic groups and the mass media.	II. b, f III. a IV. f V. b VI. d, h VII. a IX. b	

OTHER:

3.3 Other Goals and Objectives

GOALS	OBJECTIVES
Introduce students to the concept of the "pervasiveness" of the mass media in America.	Understand the pervasive nature of U.S. mass media and be able to relate the concept to one's own life.
Introduce students to the history of the mass media in the U.S.	Understand how the mass media evolved in America and how that evolution relates to the present situation and possible future courses.
Understand the four major media functions.	(List and explain) the four major media functions and understand how they are interrelated.

4. Texts and Other Instructional Materials

Required Textbook:

Pember, Don.	Mass Media in America. Chicago, Science Research Associates, 1981
Reading(s)	Various handouts from newspapers, magazines
Media	Various films* - recent videotapes
Other:	

Recommended:

Text(s)

Reading(s)

Media

Other

*Example of films used Fall, 1982:

History unit: "Mightier Than the Sword" - "Goodbye, Billy"

Newspaper unit: "First Edition"

Radio unit: "Is Everybody Listening?"

TV unit: "TV Guide" - "Electric Flag"

Government/media unit: "Free Press vs. Fair Trial"

Media economics unit: "Business of Newspapers" - "Sixty-second Spot"

Future: "Media Massaging the Mind"

5. Evaluation and Grading Plans

EVALUATION PLAN

Students will be evaluated by: exercises and short papers, three unit exams and a final examination.

The unit exams and final exam will contain both objective and essay questions. Questions will be based on both reading assignments and class activities.

GRADING PLAN:

Grades will be calculated approximately as follows:

Short papers and exercises, quizzes: 15%

Unit tests: 50%

Final examination: 35%

GRADING:

Points will be kept; final grades will be distributed approximately as follows:

89 - 100% - A

79 - 88% - B

67 - 78% - C

55 - 66% - D

0 - 54% - F

6. Course Policies

State course policies, such as attendance, fees, materials, expectations regarding such activities as field trips, practicum, projects, and the like.

Attendance/participation: Since certain in-class activities cannot be made up and are important parts of the course, students are expected to attend regularly. Attendance may be used as a factor in determining final grades for students on "border" between grades.

Reading/writing assessment: A simple exercise to assess students' reading and writing abilities will be administered sometime during the first two weeks of class. Students with difficulties will be referred to the class tutor for assistance.

Reading: Students will need to keep up on assigned readings, since much of this material will not be covered in class. A study guide with questions designed to aid in understanding the reading and preparing for exams will be provided for most units. Students will be expected to read about 375 pages from the text during the semester, as well as several handouts for each unit.

Other: Occasionally students will be required to complete some outside media-related activity. Examples: find newspaper articles with bias; review TV show; critique advertisements.

COURSE OUTLINE

TIER I GENERAL EDUCATION COURSE

Course Title: Physical Science 45LS
Introduction to Astronomy
Course Author(s): Kate Brooks

1. CATALOG DESCRIPTION

Title of Course:	Introduction to Astronomy
Course Number:	Physical Science 45LS
Unit Value:	3 units
Mode of Instruction:	3 hour lecture, 1 hour autotutorial

Brief Description of the Course:

A survey of current concepts of the universe and their historical evolution from an intradisciplinary approach. Emphasis is placed on the creative process of scientific inquiry by which current scientific understanding has been achieved, on the aesthetics of science, and on the limitations and implications of scientific knowledge. The material is presented throughout with the aid of the planetarium sky and the autotutorial method of instruction. Opportunities for the development of skills in critical thinking, problem-solving, and effective learning will be provided throughout the course.

Articulation Statement:
LMC General Education
Transfer: UC, CSUC (Gen. Ed. area B)

2. OVERVIEW and RATIONALE

Overview

Physical Science 45LS (Introduction to Astronomy) is a one semester course whose major goal is to develop a familiarity with the known contents, processes and evolution of the macroscopic physical universe and with the scientific method by which such knowledge has been uncovered. The content is organized in the traditional sequence beginning with the motions of the Earth and its closest neighbors and the naked-eye appearance of the universe as seen from Earth and moving outward in space to a consideration of planets and the solar system, stars, galaxies and finally the universe as a whole. Paralleling this spatial sequence, the course will also present an historical evolution moving forward in time from the geocentric view and mythological approaches of ancient cultures through the Copernican revolution up to the most current cosmological models of the universe. Key historical figures and the tools and methods by which they uncovered knowledge are stressed. Special attention is paid to the mode of scientific inquiry by which observation, classification and the perception of regularities have led to the discovery of scientific laws and the construction of models and theories.

The topics in the course are presented largely through lectures, media presentations and readings in a text and supplementary articles and books. The mode of inquiry is conveyed partly through lectures and reading but also by means of direct participation on the part of the learner. The planetarium facility is used extensively, not only to familiarize the learner with the appearance and motion of celestial objects in the night sky but also to allow participation in the scientific process of collection and interpretation of data. Further direct experience occurs through outdoor observing exercises requiring collection and interpretation of data.

While the main emphasis of the course is the current concepts and the process of inquiry by which they have evolved, attention is also given to constellations, older cultures' myths and beliefs about the sky, the value of the space effort to society and ethical and societal implications of astronomical knowledge. Philosophical considerations which arise from theories of the origin and evolution of the universe and the limitations of science in answering some of the ultimate questions are also explored. The learner is encouraged to think critically and to clarify his or her own ideas, values and feelings about the universe, the place of mankind within it and its relevance to the meaning of our lives.

Rationale

Introduction to Astronomy is conceived and taught as a general education course and thus incorporates in a central way the major themes, concepts and mode of inquiry common to all disciplines within its intradisciplinary family - physics, chemistry and general physical science. It seeks to demonstrate that the science of astronomy is a continual search for order through discovering universal laws governing the interaction of matter and energy and their transformation. From the earliest perceptions of the regular cycles of the celestial objects to the modern perception of the law of the expanding universe, the course stresses the order that has been found to exist in the universe and expressed in scientific laws. It demonstrates how the macroscopic behavior and evolution of the largest units of matter in the universe are governed by the interaction of matter and energy and the action of the fundamental forces on elementary particles. The four major stages in the scientific process are emphasized with each topic studied, both through lecture and participatory modes of instruction. There is a continual attempt to foster an appreciation of both the beauty and order in the universe and also the painstaking work and creative accomplishments of those men and women of different cultures who have brought astronomical knowledge to mankind as a whole.

Reading and writing skills and the skill of effective thinking are enhanced respectively through reading and writing assignments and exercises which call for the manipulation and interpretation of data and tests which stress the understanding of concepts through their application to new situations.

3.1 Course Content Goal

The intent of this course is to introduce the following course content to the learner.

I. Orientation to the Sky

  A. The Importance of Careful Observation

  B. Regular Star Patterns: The Constellations

  C. Regular Diurnal Motion of the Celestial Sphere

  D. Classifying the Constellations:

    1. Circumpolar
    2. Equatorial
    3. Zodiacal

  E. Models which explain the diurnal motion

    1. the ancient geocentric view
    2. the Copernican heliocentric view
    3. the importance of proof

  F. Methods of measuring position on the celestial sphere

    1. Horizon coordinate systems
    2. Equatorial coordinate system

  G. The value and meaning of mythology of ancient cultures about the sky

II. The Observation and Interpretation of Regular Cycles of the Earth, Sun and Moon

  A. Appreciation of the order which the regular, predictable cycles of celestial objects have brought to life on the Earth

  B. How these cycles are observed from the Earth and explained in both the geocentric and heliocentric models

    1. day and night and the rotation of the Earth
    2. the motion of the sun through the zodiac and the orbit of the Earth
    3. the changing daily path of the sun in Earth's sky and the Earth's axial tilt; solar energy as a societal issue
    4. the phases of the moon and its motion through the zodiac
    5. the cycle of eclipses
    6. the precessional cycle of the Earth

  C. The significance of understanding what frame of reference one is viewing from (both in scientific observation and human relationships)

3.1 Course Content Goal, continued

D. The distinction between astronomy and astrology

E. The possible effects of astronomical cycles on human beings and other living organisms on Earth

F. The accomplishments of ancient civilizations in understanding and measuring astronomical cycles

III. The Birth of Modern Astronomy: Understanding the Mechanics of the Solar System and the Development of the Telescope.

A. Observed appearance and regular motions of the planets

B. Historical development from geocentric to heliocentric theory

1. Ptolemy and the concept of epicycles
2. Copernicus - the greater beauty and simplicity of the heliocentric theory
3. Galileo
4. Tycho Brahe - the painstaking naked-eye observer
5. Kepler and his three laws of planetary motion
6. Isaac Newton and the law of universal gravitation

C. Clear-cut demonstration of the four stages in the scientific process in the work of Brahe, Kepler and Newton

D. The development of the refracting and reflecting telescopes by Galileo and Newton, respectively

E. Appreciation of the creativity of those who advanced new and revolutionary models

IV. The Solar System and the Question of Life on Other Worlds

A. The physical characteristics of planets, satellites, comets and meteoroids

B. Classification of terrestrial vs. Jovian planets.

C. Conditions for the development or continuance of life on a planet and for the presence of atmospheres

D. Models of the formation of the solar system which explain the regularities of planetary motion and physical characteristics

E. The value to society of studying the other planets

F. Societal decisions regarding the uses of space

1. Building space colonies
2. Sending further space missions, manned and unmanned, to study planets
3. Terraforming planets to make them habitable
4. Searching for extraterrestrial life and intelligence

3.1 Course Content Goal, continued

V. The Sun and Stars

   A. The nature and behavior of light

   B. Analyzing light with spectroscopes

   C. What astronomers learn about sources of light from studying their spectra

   D. The spectra of the sun and stars

   E. The surface appearance of the sun

      1. Sunspots and their possible effect on Earth
      2. Granulation and Prominences
      3. Solar radiation and Solar Wind

   F. Appreciation of the importance of the sun to Earth life

   G. The current model of how the sun produces energy

   H. Classifying stars, measuring their distance

   I. The relationship of stellar luminosity and surface temperature and its interpretation

   J. The life cycle of the sun and stars - the current model of stellar evolution

   K. Nuclear fusion as a societal issue

VI. Galaxies and the Universe

   A. The nature of the Milky Way

      1. Ancient myths
      2. Sun-centered models of the early 20th century
      3. Discovery of the true shape and dimensions of the Milky Way Galaxy and the location of the solar system within it

   B. Classification, regularity patterns and evolutionary models of galaxies

   C. The observed redshift of galaxies

   D. Hubble's law revealing the expansion of the universe

   E. Cosmological models

   F. Metaphysical explanations of creation

   G. The work of the modern astronomer

   H. Accomplishments of women astronomers

   I. The limitations of science in answering ultimate questions of the origin of the universe

3.2 Criteria Related Goals: Criterion: Intradisciplinary

Criterion stated in goal form: To Teach the Intradisciplinary Elements of the Intradisciplinary Family of Courses

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. To demonstrate the concept of order in the physical arrangement and the regularity of motion of all macroscopic objects in the universe.	1. To describe or identify the order expressed in: a. the regular cycles of the Earth, sun and moon. b. the regularities of planetary motion and physical characteristics. c. the luminosity-temperature relationship for stars. d. the physical appearance of galaxies. e. the law of the expanding universe	I. D, E II. A, B III. A IV. A, B V. 1 VI. B, C, D	Lecture with slides, films, demonstration with planetarium instrument. Reading. Construction of tables and graphing results. Review exercises, such as AT units, review questions.
2. To demonstrate that the search for the cause of astronomical phenomena is the fundamental goal of astronomers.	2. To explain why the above phenomena are thought to occur.	I. E. - II. B. III. B. 6 IV. D V. G., J. VI. B, E, F	Lectures, reading, Discussion
3. To show that the present understanding represents the best guess or "model" which can explain observed regularity patterns and predict future behavior.	3. To discuss areas of theory which are still extremely uncertain.	IV. D V. G V. J VI. E	Lecture, Discussion

OTHER:

3.2 Criteria Related Goals: Criterion: Intradisciplinary

Criterion stated in goal form: To Teach the Intradisciplinary Elements of the Intradisciplinary Family of Courses

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
4. To foster an understanding of the principle that physical laws apply universally to objects in the cosmos.	4. To appreciate that the power of scientific laws lies in their universality and predictability.	III. B, 5 V. J VI. D	Lecture, reading.
5. To demonstrate that the universe and the large-scale units of matter within it are (or have been) structured and evolve by the action of fundamental forces on elementary particles.	5. To describe how gravity and the energy of objects govern motions in the solar system and how gravity and the nuclear force, together with the laws of gases, determine the structure and the life cycle of stars, galaxies and the universe.	III. A, B V. G, J VI. E	Lecture, reading, slides.
6. To demonstrate how the principles of conservation of mass/energy, stability v. disorder, kinetics, equilibrium states and the laws of thermodynamics relate to the macroscopic universe and determine how it evolves.	6a. To describe how motions in the solar system, galaxy and universe (or the continued existence of a star) are due to an equilibrium between the momentum of object (or its internal pressure) and forces acting on it.	IV. B V. G VI. E	Lecture
	6b. To explain why the universe may die a "heat" death.	VI. E	Lecture, reading.
	6c. To describe how, in transformations of astronomical objects, energy is conserved but disorder increases.	IV. B V. G J	Lecture.

OTHER:

3.2 Criteria Related Goals: Criterion: Aesthetics of Knowledge

Criterion stated in goal form: To Teach About the Aesthetic Qualities of the Knowledge of the Discipline

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1a. To foster an appreciation for the beauty, vastness and order in the universe.	1. To express in writing or orally a sense of the beauty and vastness of the universe and an understanding of the drive for simple explanations.	I. E II. B	Lectures, discussion Slides Films Planetarium Sky
1b. To foster an appreciation of the fact that astronomers search for the model or explanation which has the greatest simplicity or beauty.			
2a. To enhance the sense of how mankind has evolved out of the cosmos.	2. To express in writing or orally feelings regarding the astronomical view of man's origins and reactions to the kind of work astronomers do.	III. B, E IV. E V. C VI. C	Lectures
2b. To foster an appreciation for the intensity of concentrated, painstaking effort required to uncover astronomical knowledge.		II. D III. B-E	Media presentations (tapes with slides/music)
3. To enhance appreciation for the value of myths about the sky.	3. To describe myths about the sky. Compare those of different cultures and express views regarding their value.	I. G VI. A 1	Lectures, reading. Slides.

OTHER:

3.2 Criteria Related Goals: Criterion: Modes of Inquiry

Criterion stated in goal form: To Teach the Mode(s) of Inquiry Indigenous to the Discipline

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To develop an understanding of the four stages in the scientific process: a. observation b. classification c. regularity formulation d. interpretation or model construction.	1. To explain any one of the four stages in the process of scientific inquiry and identify which stage is being done if given an example or asked to perform a task.	I. A,B,C,D,E,F II. B, 1-4 III. A,C IV. A,B,D, V. G-J VI. A,3, B,C,D,E	Lectures - Record data regarding a. daily path of sun b. the position, surface features and shape of of the moon. c. positions of constellations or planets either in the planetarium or real sky. Interpret such data.
2. To develop an understanding of the tools astronomers use for stage 1 (observation)	2. To recognize, identify or diagram basic instruments and explain how and why they are used.	III. D V. A-D VI. C	Lecture. Demonstrations of optics, light spectra. Slides.
3. To demonstrate what and how astronomers learn from spectra.		II. B, 2	
4. To distinguish astronomy from astrology.	4a. To distinguish statements of an astrologer from those of an astronomer. 4b. To describe or identify the major differences between astronomy and astrology.		Lectures, in-class writing.

OTHER:

3.2 Criteria Related Goals: Criterion: Implications of Knowledge

Criterion stated in goal form: To Explore These Implications of the Knowledge of the Discipline: Values, Ethics and Future

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To introduce the idea that astronomical cycles might affect people and other life.	1. To express views and analyze values regarding: how astronomical cycles might affect us.	II. E	Lecture, writing exercises.
2. To explore ethical issues involved in the uses of space, in gathering knowledge about the planets, and in searching for extraterrestrial life.	2. To describe methods, express one's own views and analyze one's values regarding: a. uses of space b. exploring and terra-forming planets c. building space colonies d. how creation happened e. how mankind evolved on Earth	IV. E, F	Lecture, slides Discussion, writing exercises.
3. To explore issues involved in deciding how and why creation happened and how mankind evolved on Earth.	3. To compare and contrast scientific, mythological and metaphysical approaches to understanding: a. how creation happened b. how man evolved out of the cosmos	VI. E, F I	Lecture, slides discussion Media presentations (tape with slides and music) such as planetarium show ("In the Beginning") or film "Universe"

OTHER:

3.2 Criteria Related Goals: Criterion: Reading and Writing in the Learning Process

Criterion stated in goal form: To Provide Opportunities for Learners to Develop Higher Cognitive Skills Through Reading and Writing

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To require reading in a descriptive level text and supplementary books and articles.	1a. Demonstrate comprehension of text and other readings by answering questions requiring understanding of concepts. 1b. To demonstrate ability to summarize the major points of a descriptive level article or book and to express a personal opinion or reactions (i.e., write a book or article review, or a term paper.	All parts.	1. Tests - Text and supplementary reading or term paper.
2. To require homework assignments, observing exercises, in-class writing exercises and essay questions on test.	2. To demonstrate skill in writing clear interpretations of data collected, descriptions of the physical universe, concepts as to how the universe operates and has evolved, and values and feelings regarding ethical issues related to astronomy.	All parts but especially I. G II. D, E IV. E, F V. J, H VI. F, 1 (for controversial topics, values)	Written homework assignments. Written conclusions on observing assignments.

OTHER:

3.2 Criteria Related Goals: Criterion: Critical and Effective Thinking

Criterion stated in goal form: To Provide Opportunities for Learners to Enhance Their Effectiveness in Thinking

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To enhance skills in effective, logical thinking by giving practice in drawing correct conclusions from observed data and patterns.	1. To draw effective conclusions from astronomical data.	All parts	Class discussion, verbal and written responses to classroom questioning by instructor
2. To encourage learner to follow through an idea or personal theory to see if it would work to explain an observed phenomenon.	2. To demonstrate understanding of concepts by applying them correctly to new situations.	All parts, esp. Units 1, 11	observing and lab exercises in which practice is given on all phases of scientific mode of inquiry

OTHER:

3.2 Criteria Related Goals: Criterion: Reading and Writing in the Learning Process

Criterion stated in goal form: To Provide Opportunities for Learners to Develop Higher Cognitive Skills Through Reading and Writing

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
3. To foster free flow of ideas whether they be explanations, applications of concepts, personally devised theories about observations or personal opinions about controversial topics of societal issues in astronomy.	3. To express clearly in written or oral form one's opinion on a controversial topic.		Frequent in-class writing exercises where students express opinions on controversial topics, concoct theories, explain or apply concepts.
4a. To assess sufficiency of learner's reading and writing skills for meeting the demands of this course.	4a. To know the sufficiency of reading and writing skills for mastering tasks of this course.	Unit 1	In-class, on-the-spot summaries of written material.
b. Inform learners of tutorial support system for improving reading and writing skills.	4b. To be acquainted with procedure for seeking tutorial assistance in improving reading and writing skills.		

OTHER:

3.2 Criteria Related Goals: Criterion: Pluralism

Criterion stated in goal form: To Encourage the Learner to Consider the Variety of Perspectives, Experiences and Persuasions that have an Impact on Society

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To foster an: a. appreciation of the astronomical accomplishments of ancient cultures b. mythological approaches of ancient cultures c. metaphysical explanation of the origin of the universe d. the accomplishments of women astronomers	1. To express in writing or through identification, an understanding of and an appreciation for: a. b. c. d.	I. G II. D VI. A, 1 VI. F, H, 1	Lecture, slides. Planetarium shows and presentations.

OTHER:

3.2 Criteria Related Goals: Criterion: Creativity

Criterion stated in goal form: To Introduce to Learners Creative Processes and Examples of Human Creativity

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. To foster an appreciation of the creativity of astronomers who have led us to new views of the universe.	1. To express an understanding of the creative aspect of model construction and the devising of theories which explain observed astronomical phenomena.	I. G II. D, E III. B, C, D, E IV. D V. G, J VI. E, G	Tests and Homework Questions Lecture.
2a. To experience the creative process in searching for theories which might explain observed phenomena.	2. To devise and express clearly in written or oral form: a. theoretical explanations for observed phenomena.		In-class participation where instructor asks students to: a. devise an explanation or theory
2b. To experience the creative process in searching for proof of widely held theories or of their own personally concocted theories.	b. proof of theories widely held to be true (i.e., the Earth rotates)		b. devise proof of the explanation c. devise proof of controversial theories.
2c. To encourage free flow of ideas in the learner's mind.	c. proof of phenomena for for which there is no clear-cut scientific evidence.		d. justify belief in nonscientific approache to studying the cosmos (metaphysical, astrological) either orally or in writing.

OTHER:

4. Texts and Other Instructional Materials

a. Required: Long, Charles. Discovering the Universe. San Francisco, Harper and Row, 1980

Ebbighausen, Astronomy (3rd Edition). Columbus, Ohio: Charles E. Merrill, 1976

"Star and Planet Locator" Star Chart

b. Recommended: Sagan, Carl. The Cosmic Connection (Dell Book, 1973)

c. Media Materials Available and Recommended for Instructor Use.

Astronomical slide sets from Lick and Palamar Observatories

Planetarium tape-slide presentations:

"Dramatic Scenes from the Hansen Planetarium"

"The People" (Hansen Planetarium)

"Springtime of the Universe" (Hansen Planetarium program on Stellar evolution, the sun and nuclear fusion)

"In the Beginning" (on Stellar evolution, the sun and nuclear fusion)

Hubbard Scientific Overhead Transparencies

Celestial Sphere Globes

Blackboard Optics Kit

Film: "Universe"

Cosmos videotapes (Carl Sagan)

Ascent of Man videotapes (Jacob Bronowski)

d. Books in Learning Center available for independent reading and research (for book reviews or term papers).

4. Texts and Other Instructional Materials, continued

Units I, II: Astronomical Cycles, Ancient Astronomy

Allen, Richard Henckley. *Star Names: Their Lore and Meaning*. New York: Dover Publications, 1963

Aveni, Anthony. *Skywatchers of Ancient Mexico*. Austin, Texas: University of Texas Press, 1980

Brown, Peter Lancaster. *Megaliths, Myths and Men*. New York: Taplinger Publishing Company, 1976

Burland, Cottie. *North American Indian Mythology*. London: Hamlyn Publishing Group Limited, 1965

Clark, Ella. *Indian Legends of the Pacific Northwest*. Berkeley, California: University of California Press, 1953

Cornell, James. *The First Stargazers*. New York: Charles Scribner's Sons, 1981

Hawkins, Gerald S. *Beyond Stonehenge*. San Francisco: Harper and Row, 1973

Hawkins, Gerald S. *Stonehenge Decoded*. New York: Dell Publishing Co., Inc. (A Delta Book), 1965

Hoyle, Fred. *On Stonehenge*. San Francisco: W.H. Freeman and Company, 1977

Jobes, Gertrude and James Jobes. *Outer Space: Myths, Name Meanings, Calendars*.
New York: The Scarecrow Press, 1964

Krupp, E.C., ed. *In Search of Ancient Astronomies*. San Francisco: McGraw Hill, 1978

4. Texts and Other Materials, continued

Units III, IV: The Birth of Modern Astronomy
The Nature of the Solar System
The Question of Life in the Universe

Adelman, Saul and Benjamin. Bound for the Stars Prentice-Hall, 1981

Andrade, E.N. da C. Sir Isaac Newton: His Life and Work. Garden City, New York: Doubleday & Co., Inc. (Anchor Books), 1964

Asimov, Isaac. Mars, the Red Planet. Lathrop, Lee and Shepard Co., 1977

Bracewell, Ronald. The Galactic Club: Intelligent Life in Outer Space. San Francisco: W.H. Freeman, 1975

Intro. by John C. Brandt

Comets: Readings from Scientific American. San Francisco: W.H. Freeman, 1981

Calder, Nigel. The Viking Press, 1978

Goldsmith, Donald. The Quest for Extraterrestrial Life.

Jonas, Doris and David Jonas. Other Senses, Other Worlds. New York: Stein and Day, 1976

Kaufmann, William J., III. Planets and Moons. S.F.: W.H. Freeman, 1979

Kopal, Zdenek. The Solar System. New York: Oxford University Press, 1973

MacVey, John W. Whispers from Space. New York: MacMillan Co., 1973

Mehling, Theodore. Astronomy and the Origin of the Earth. Dubuque, Iowa: Wm. C. Brown Co., 1973

Morrison, David and Jane Samz. Voyage to Jupiter. Washington, D.C.: NASA, 1980.

Murray, Bruce, ed. The Planets. W.H. Freeman, 1982

Oberg, James. New Earths. Stackpole Books, 1981

Richardson, Robert S. The Star Lovers. N.Y.: The MacMillan Co., 1967

Sagan, Carl, ed. Communication with Extraterrestrial Life. Cambridge, Mass.: MIT Press, 1973

Sagan, Carl. Murmurs of Earth. Random House, 1978

The Solar System: A Scientific American Book San Francisco: W.H. Freeman and Co., 1975

Sullivan, Walter. We Are Not Alone. New York: New American Library (A Signet Book), 1974

Wood, John A. The Solar System. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1979

4. Texts and Other Instructional Materials, continued

Units V-VI. The Life Cycle of the Sun and Stars; Galaxies and the Universe

Berendzen, Richard, Richard Hart, and Daniel Seeley. Man Discovers the Galaxies. New York: Science History Publications, 1976

Bok, Bart J. and Bok, Priscilla. The Milky Way. Cambridge, Mass: Harvard University Press, 1974

Bok, Bart, and Priscilla Bok. The Milky Way. Cambridge, Mass., Harvard University Press, 1981

Calder, Nigel. Violent Universe. New York: The Viking Press, 1969

Chaisson, Eric. Cosmic Dawn. Atlantic-Little, Brown, 1981

Charon, Jean. Cosmology: Theories of the Universe. New York: McGraw Hill, 1970

Ferris, Timothy. The Red Limit. William Morrow and Co., 1977

Gamon, George. A Star Called the Sun.

Intro. by Owen Gingerich
Cosmology + 1: Readings From Scientific American.
S.F.: W.H. Freeman, 1977

Jastrow, Robert. God and the Astronomers. N.Y.: Norton, 1978

Jastrow, Robert. Red Giants and White Dwarfs. N.Y.: Harper & Row, 1971

Jastrow, Robert. Until the Sun Dies. N.Y.: Norton, 1977

Kaufmann, William J. Black Holes and Warped Spacetime. S.F.: W.H. Freeman, 1979

Kaufman, William J. Galaxies and Quasars. S.F.: W.H. Freeman, 1979

Kaufman, William J., III Relativity and Cosmology. N.Y.: Harper & Row, 1973

Munitz, Milton, ed. Theories of the Universe. New York: MacMillan Publishing Co., Inc. (The Free Press), 1957

Page, Thornton and Page, Lou Williams, ed. The Evolution of Stars: How They Form, Age, and Die. London: MacMillan Co., 1968

Rowan-Robinson, Michael. Cosmic Landscape: Voyages Back Along the Photon's Track.

Shapley, Harlow. Galaxies. New York: Atheneum, 1967

Shipman, Harry L. Black Holes, Quasars, and the Universe. Palo Alto: Houghton Mifflin, 1980

Silk, Joseph. The Big Bang: The Creation and Evolution of the Universe. S.F.: W.H. Freeman, 1979

4. Texts and Other Materials, continued

Sullivan, Walter. Black Holes: The Edge of Space, the End of Time. Garden City, New York: Anchor Press/Doubleday, 1979

Wald, Robert M. Space, Time, and Gravity. Chicago: Unviersity of Chicago Press, 1977

Hoyle, Fred. Ten Faces of the Universe. S.F.: W.H. Freeman, 1977

Murchie, Guy. Music of the Spheres: The Material Universe from Atom to Quasar, Vol. I
The Macrocosm: Planets, Stars, Galaxies, Cosmology.
N.Y.: Dover Publications, 1967

Sagan, Carl. The Cosmic Connection: An Extraterrestrial Perspective. N.Y.: Dell Publishing Co., (A Dell Book), 1975

Sagan, Carl. Cosmos. New York: Random House, 1980

Seeds, Michael A. Horizons Wadsworth Publishing, 1981

Seeds, Michael A., Ed. Astronomy: Selected Readings. Menlo Park: Benjamin Cummings, 1980

Wagoner, R. and Donald Goldsmith. Cosmic Horizons: Understanding the Universe. S.F.: W.H. Freeman, 1982

5. Evaluation and Grading Plans

EVALUATION PLAN

Students will be evaluated on their performance on

a.	Tests, exams	40%
b.	Homework Assignments designed to develop effective thinking and understanding of scientific mode of inquiry. (Observing lab exercises)	20%
c.	Homework Assignments designed for review and mastering of concepts and factual content. (Autotutorial slide-tape units with test or study questions)	25%
d.	Independent reading and research. Book, article reviews or term paper.	10%
e.	Attendance	5%

GRADING PLAN:

Points are accumulated and grades assigned on the basis of the following scheme:

100 - 90% = A

80 - 89% = B

67 - 79% = C

50 - 66% = D

6. Course Policies

Attendance is required and earns 1/2 point per 50-minute class attended.

One or two field trips offered;

a. outside observing with school telescope at nearby site

b. telescope observing at Chabot Science Center in Oakland

COURSE OUTLINE

TIER I GENERAL EDUCATION COURSE

Course Title: United States History

Course Author(s): Chester Case

1. CATALOG DESCRIPTION

Title of Course:	United States History
Course Number:	32LS
Unit Value:	3 units
Mode of Instruction:	Lecture

Brief Description of the Course:

United States History is a one semester overview of the nation's development and its relations with the Western Hemisphere and the world from pre-colonial times to the present. To give detail to the broad survey, selected topics will be taken up for close study, such as the rise and transformation of industry, the American heritage of rights and liberties, and the United States as a world power. Modes of historical inquiry and critical thinking will be employed in studying the past and present and in speculating on possible futures.

Articulation Statement:

Prerequisites: None

2. OVERVIEW and RATIONALE

Overview

This one semester course in United States History will cover a time span ranging from the pre-colonial times to the present. The course will inform learners of key events, trends, periods and persons that have influenced the development of the United States. To convey a sense of the broad sweep and continuity of United States History and at the same time to afford a close-up look at selected parts of that history, the course will feature a series of integrating, interpretive overviews interspersed between units of study on selected topics. The overview will sketch in, for example, the colonial setting, describe the westward movement, or portray the changing character of the federal government and the presidency. The units will lead learners to a close analysis of topics or periods such as the rise and transformation of industry, the American heritage of rights and liberties, or the United States' relations with the world.

Information, concepts and theories will be drawn in an intradisciplinary fashion from economics, geography and political science. The course will engage learners in a study of the modes of inquiry used by historians. Using primary and secondary source materials, learners will have the opportunity to develop skills in reading and writing, critical and imaginative thinking as they work with the essential components of history's modes of inquiry, that is, formulating questions and advancing answers, locating, organizing and evaluating evidence, analysis, interpretation and reporting. This course will ask and explore questions of causation, interpretation, motivation, continuity and discontinuity, and possible futures of historical and contemporary trends. Biography will be used to highlight periods, events or movements.

Rationale

This course in United States History invites learners to study their nation's past and present and to speculate on the future as a way to gain understanding of themselves and the society in which they live. The study of history helps establish an orientation to time and place and a frame of reference of values and world view so much needed by citizens in these modern times of conflict, confusion and rapid change. The study of history promotes an awareness, for instance, of continuities and discontinuities, causes and effects, human motivations and forces that drive change. United States History affords learners numerous opportunities to observe how the generation of knowledge effects societies and history, as for instance, in the application of scientific discoveries to technology and industry, or to observe the implications for society of ideas and beliefs such as liberty, equality, opportunity, or pluralism. Because the writing of history involves logic and systematic thinking as well as art, critical thinking and creativity, imagination and aesthetics are readily engaged.

2. OVERVIEW AND RATIONALE, continued

By using the modes of inquiry employed by historians as they inquire into the past, learners can try out strategies for evaluating evidence, solving problems, posing and answering questions, and making decisions that are potentially applicable to their own lives as individuals and citizens. By gaining a familiarity with the American past and sense of how history is written, learners should be able to judge better the assertions and persuasions of politicians, publicists, ideologues, advertisers and others who claim to tell us what the world is all about and what we ought to do. Learners ought to be able to render some semblence of sensible meaning from the chaos and confusions of information that bombards them daily. A study of history can reinforce in learners a sense of connectedness and interrelations of life and events in the history of the United States and this planet. It can lead to a clarification of personal assumptions, values and world view. A study of United States History can awaken in learners an understanding of where and how the citizen must act to influence the emergent future for themselves, their nation and the world.

3.1 Course Content Goal

The intent of this course is to introduce the following course content in the learner.

1. Overview and Orientation

   1.1. Goals of the course
   1.2. Questions to be addressed
   1.3. Content of the course (overview)
   1.4. Structure of the course

      1.4.1. "Big Picture" lectures
      1.4.2. "Close-up" topical areas

   1.5. Course procedures and requirements

2. Overview: to set the scene for the story of conquest and colonization of the New World by European powers, to show the distinctive character of England's American colonies and precedents to nationhood.

3. The New World, the Old World and Colonization

   3.1. Geographical setting
   3.2. Peoples and cultures of the New World
   3.3. European and African antecedents
   3.4. Patterns of colonization: Spain, England, France
   3.5. From colony to nation: The emergence of the United States

4. Reading and Writing Assessment

5. The Writing of History

   5.1. How history is written

      5.1.1. steps in the process of historical inquiry
      5.1.2. objectivity and subjectivity
      5.1.3. primary and secondary sources
      5.1.4. problems and issues in history writing

   5.2. Notable historians and their times

   5.3. What the study of history can do for you; "Everyone his/her own historian"

   5.4. History as an art

6. History and the Social Sciences

   6.1. The meaning of "intradisciplinary"
   6.2. Aims, scope and methods of social sciences

      6.2.1. history
      6.2.2. economics
      6.2.3. political science
      6.2.4. geography

3.1 Course Content Goal, continued

- 6.3. What is shared by the social sciences
    - 6.3.1. topics of study; human activity, social institutions and relationships
    - 6.3.2. modes of inquiry
    - 6.3.3. utilization of one another's findings

7. Overview: to describe and analyze the Westward Movement and Turner's Frontier Thesis, to show the rise of nationalism and stresses of regional conflicts, to name the units to be studied and why they were selected.

8. The Rise and Transformation of Industry

- 8.1. The Industrial Revolution Worldwide
    - 8.1.1. Industrialization; characteristics and dynamics
    - 8.1.2. Contrasts of the agricultural, traditional society and the industrialized society
    - 8.1.3. Britain's 18th century industrial revolution
    - 8.1.4. Industrialization today; developed and developing nations
- 8.2. Industrialization in the United States
    - 8.2.1. Eli Whitney and the Lowell Maidens
    - 8.2.2. Rockdale and the paradigm shift
    - 8.2.3. Post Civil War industrialization
    - 8.2.4. Science and industrialization
    - 8.2.5. Origins and characteristics of high technology
    - 8.2.6. What might come after industrialization?
- 8.3. Concommitants to Industrialization in the United States
    - 8.3.1. Urbanization
    - 8.3.2. Immigration and the immigrant
    - 8.3.3. Exploitation of resources and development of markets
    - 8.3.4. Science and technology
- 8.4. Companion Institutions to Industrialization
    - 8.4.1. Factory
    - 8.4.2. Market
    - 8.4.3. Union
    - 8.4.4. Education
    - 8.4.5. Corporation
    - 8.4.6. Family
- 8.5. Impacts of Industrialization
    - 8.5.1. Progress and poverty
    - 8.5.2. Redefinition of social roles and values; alignment of social classes
    - 8.5.3. Resistance and rejection of industrialization and industrialism; politics, communitarianism, arts and crafts
    - 8.5.4. Alternative futures to industrialism
- 8.6. Conclusions and Synthesis

3.1 Course Content Goal, continued

9. Overview: to sketch in the Civil War, its origins, conduct and aftermath, to point out turning points in U.S. history, to show the changing social order, and to point to the impending changes brought by the twentieth century.

10. Rights and Liberties: An American Heritage

10.1 Rights and Liberties

10.1.1. Definitions
10.1.2. Bases for rights and liberties

10.1.2.1. cultural and traditional
10.1.2.2. constitution and law
10.1.2.3. philosophical; ethics and values

10.1.3. Issues and Problems of Pluralism and Dissent

10.1.3.1. tensions between the parts and the whole
10.1.3.2. balancing diversity and unity
10.1.3.3. dissent in a democratic society

10.2 Freedom of Speech

10.2.1. Philosophical and constitutional bases
10.2.2. Red Scares and McCarthyism
10.2.3. Effects of present and future communications Practices and technology
10.2.4. Issues and problems

10.3. Rights of Women in the United States

10.3.1. Women in history; contrasting views
10.3.2. Changing roles and status
10.3.3. Advocates and opponents of women's rights; episodes and events
10.3.4. Contemporary situation and future possibilities
10.3.5. Issues and problems

10.4. The Civit Rights Movement

10.4.1. Constitutional bases; provisions and amendments
10.4.2. Historic efforts to secure civil rights
10.4.3. The Civil Rights Movement

10.4.3.1. the setting
10.4.3.2. leaders and their goals
10.4.3.3. events
10.4.3.4. legislation and Supreme Court decisions

10.4.4. Contemporary situation
10.4.5. Issues and problems
10.4.6. Possible futures

10.5. Conclusions and synthesis

3.1 Course Content Goal, continued

11. Overview: on the theme of accelerated social change, to include, for example, the Roaring Twenties, the Depression and the New Deal, and the impact of World War II.

12. The United States and the World

- 12.1 Introduction and overview
    - 12.1.1. The concepts of foreign policy, diplomacy and international relations
    - 12.1.2. Practices, conventions and strategies of foreign policy
    - 12.1.3. Historic themes in United States' Foreign policy
    - 12.1.4. The new urgency in global problems
        - 12.1.4.1. the population bomb
        - 12.1.4.2. thermonuclear weaponry
        - 12.1.4.3. environmental degradation
- 12.2 The United States and Asia
    - 12.2.1. China trade, the Hermit Kingdom and spheres of influence
    - 12.2.2. War in the Pacific and its aftermath
    - 12.2.3. Militry interventions; Korea and Viet Nam
    - 12.2.4. The Challenge of Japan
    - 12.2.5. Present issues and possible futures
- 12.3. The United States in the Western Hemisphere
    - 12.3.1. European colonial powers and their legacies
    - 12.3.2. Monroe Doctrine, Manifest Destiny and Expansionism
        - 12.3.2.1. The Mexican War
        - 12.3.2.2. Spanish-American War
    - 12.3.3. Gunboat Diplomacy and the Big Stick Policy
    - 12.3.4. Good Neighbor Policy
    - 12.3.5. United States and Cuba
    - 12.3.6. United States and Middle America
    - 12.3.7. Present issues and possible futures
- 12.4. Conclusions and synthesis

13. Overview: on continuities and changes in the presidency and federal government since the New Deal.

14. Review and Conclusions

- 14.1. What the study of history can impart
    - 14.1.1. A mode of inquiry, a way to organize and interpret information
    - 14.1.2. A sense of continuity, analogy and change
    - 14.1.3. A sense of possibility for humankind and Spaceship Earth
    - 14.1.4. An awareness of the interconnectedness and interrelationships of life and events on Eart

3.1 Course Content Goal, continued

14.2. Resources for further learning

14.2.2. LMC courses; major, electives, general education
14.2.3. Media
14.2.4. Libraries
14.2.5. Historical monuments, restorations, museums

15. Overview: Looking Back and Looking Ahead; Where Have We Been and Where Might We Be Going?

3.2 Criteria Related Goals: Criterion: Intradisciplinary

Criterion stated in goal form: To Teach the Intradisciplinary Elements of the Intradisciplinary Family of Courses

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. Explain the term intradisciplinary	1a. List and describe the social sciences; economics, political science, geography	1a. 6.2.	1a. Lecture and discussi
	1b. Define the term, "intradisciplinary"	1b. 6.1.	1b. Lecture and discussi
2. Show how the social science disciplines contribute to one another	2a. Tell how the social sciences contribute to one another	2a. 6.3.	2a. Lecture and discussi
	2b. Identify what is in common among social sciences	2b. 6.3. and throughout 3., 8., 10., 11.	2b. Lecture and discussi

OTHER:

3.2 Criteria Related Goals: Criterion: Modes of Inquiry

Criterion stated in goal form: To Teach the Mode(s) of Inquiry Indigenous to the Discipline

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To familiarize the learner with the basic steps in the historical mode of inquiry: 1. awareness of problem; questions 2. reflection, review of information 3. formulation of tentative answer 4. gather, organize, evaluate, interpret information 5. test tentative answer 6. conclusion; generalize	1a. List and describe steps in historical mode of inquiry	1a. 5.	1a. Lecture, readings, discussion Writing exercises
	1b. Given a "kit" of historical materials, to write a history using historical mode of inquiry	1b. 8., 10., or 12.	1b. Demonstration and in-class workshop on use of sources, organization and interpretation of materials, writing
2. To show how and why historical interpretations can vary from age to age and/or from historian to historian	2a. Read, compare and contrast several works on the same topic and offer ideas on the differences and similarities, e.g., on women's role in history, or accounts of the U.S.-Mexico War.	2a. Throughout 10.3., 12.2.	2a. Demonstration and exercises in critical analysis; close reading of selected works. Discussion and essay writing
3. Encourage the learner to use historical mode of inquiry in his/her own life	3a. Offer possible applications of historical mode of inquiry	3a. Throughout 14.	3a. Lecture, discussion

OTHER:

3.2 Criteria Related Goals: Criterion: Implications of Knowledge

Criterion stated in goal form: To Explore These Implications of the Knowledge of the Discipline; Values, Ethics and Future

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. To show how values and ethical positions influence historical events and developments	1. Identify and describe values or ethical positions embedded in selected historical accounts and hypothesize on their influence	1. 5.1., 8.1., 8.5., 9., 10.1.3., 10.3., 12.3.	1. Lecture, discussion, readings, formative writing, essay
2. To show how the values of an historian will influence her/his historical writing	2. Given historical writings, search out and identify evidences of influence by values and/or ethics	2. Throughout, especially 3., 5., 8.5., 10.3, 12.3.	2. Readings, analysis, discussion, formative writing
3. To illustrate the impact of knowledge on history, e.g., scientific knowledge on technology and industry	3a. Recognize, discuss and offer generalizations on the connections between industrialization and the Scientific Revolution	3a. 8.	3a. Demonstration, exercises, close reading and discussion
	3b. Formulate generalizations on the connection between the generation of knowledge and historical events	3b. Throughout 5., 8.,15.	3b. Discussion, exercises, writing

OTHER:

3.2 Criteria Related Goals: Criterion: Aesthetics of Knowledge

Criterion stated in goal form: To Teach About the Aesthetic Qualities of the Knowledge of the Discipline

SUB-GOALS (What the course intends) to do.	OBJECTIVES (Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	CONTENT (Refer to Course Outline)	INSTRUCTIONAL Procedures/Materials
1. To show how history through "art" can invite one to travel via imagination in time to experience and learn from the events and lives of other people in other places in other epochs	1a. Identify and express similarities and differences in their lives and times with those of others	1a. Throughout	1a. Discussion, role play, imaginative writing, projection of oneself to other times and places, exercises
2. To introduce historical works selected to exemplify aesthetic qualities	2. To experience, reflect upon and discuss aesthetic qualities such as imagery, evocativeness, style	2. Throughout, especially 5.4., 8.2., 8.5., 9., 14.1.	2. Lecture, discussion, readings
3. To present history in media other than writing such as film, literature, or visual arts	3. To experience and respond orally or in writing to historical interpretations conveyed in film, literature, or visual arts	3. Throughout	3. Viewing, discussing selected works of history in modes other than writing, expressive writing
4. To encourage the learner to experience the joy of independent, imaginative and interpretive thinking in being "his/her own historian"	4. To react, orally or in writing, to experiences in thinking through historical "puzzles" and in "doing" history	4. 5., 5., 10., 12.	4. Discussion, expressive writing

OTHER:

3.2 Criteria Related Goals: Criterion: Reading and Writing in the Learning Process

Criterion stated in goal form: To Provide Opportunities for Learners to Develop Higher Cognitive Skills Through Reading and Writing

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To promote reading skills as for learning tools	1a. Demonstrate skill in using reading strategies as tools for learning	1a. Throughout	1a. In-class workshops and demonstrations, exercises, application and feedback using reading materials of the course
	1b. Demonstrate skills in discerning the main ideas of written works, of judging arguments, or varying speed in reading, and retention building strategies	1b. Throughout	1b. Similar to above
2. To promote writing skills as tools for learning	2a. Demonstrate skills in writing in the expository and essay styles	2a. Throughout	2a. In-class workshops and demonstrations; essay for each unit of study in various styles
	2b. Demonstrate skill in using writing to gather ideas, to organize information, to express ideas, and to aid retention	2b. Throughout	Frequent in-class writing such as formative writing, expressive, listing descriptive, analytical organizing
3. To encourage the development of skill in notemaking	3. Demonstrate skill in making notes from lectures	3. 2., 7., 9., 11., 13.	3. Demonstration, exercises, feedback and practice

OTHER:

3.2 Criteria Related Goals: Criterion: Critical and Effective Thinking

Criterion stated in goal form: To Provide Opportunities for Learners to Enhance Their Effectiveness in Thinking

SUB-GOALS		OBJECTIVES		CONTENT		INSTRUCTIONAL
(What the course intends) to do.		(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.		(Refer to Course Outline)		Procedures/Materials
1. To introduce aspects of effective thinking and provide practice for their application to historical materials.	1a.	Evaluate an argument or thesis on dimensions such as logic, evidence, assumptions, bias, stereotypic thinking, ethnocentrism, determinism	1a.	Throughout, 5., 14.1.	1a.	In-class workshops, exercises, demonstrations, practice and applications with feedback: lecture. Discussion, learner self-rating, group work, formative and expressive writing, close, analytical reading
	1b.	Recognize and evaluate the effects in historical interpretations such as aspects as logical fallacy, ambiguity, special pleading, relativism, analogy, metaphor, inductive and deductive reasoning, hypothesis	1b.	Throughout, 5., 14.1.	1b.	Similar to above
	1c.	Critically examine and evaluate one's own writing, recognize and repair shortcomings	1c.	Throughout	1c.	Similar to above
2. Promote attitudes and traits conducive to effective thinking, such as: to have a questioning, skeptical attitude, persistence, have a willingness to be open-minded and flexible but not gullible, to forestall premature closure on conclusions, to tolerate amgiguity, use intuition and guessing, and take risks in offering interpretations	2a.	Discuss the effects and nature of the attitudes and traits introduced and evaluate one's own "profile" on these deimensions	2a.	Throughout 5., 14.1.	2a.	Similar to above
	2b.	Reflect and assess one's own use of intuition and guessing and risk taking	2b.	Throughout	2b.	Similar to above

3.2 Criteria Related Goals: Criterion: Critical and Effective Thinking

Criterion stated in goal form: To Provide Opportunities for Learners to Enhance Their Effectiveness in Thinking

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objectiv: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
3. To encourage independence in thinking	3a. Define and discuss characteristics of independent thinking	3a. Throughout	3a. Similar to 1a.
	3b. Tell what inhibits and/or encourages independent thinking	3b. Throughout	3b. Similar to above
	3c. Recognize and discuss examples of independent thinking in historical works	3c. Throughout	3c. Similar to above
	3d. Reflect and assess one's own approaches to independent thinking	3d. Throughout	3d. Similar to above

OTHER:

3.2 Criteria Related Goals: Criterion: Creativity

Criterion stated in goal form: To Introduce to Learners Creative Processes and Examples of Human Creativity

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. To introduce examples of creativity by historians in their writing and thinking	1a. Experience the historian's recreation of an epoch in words	1a. 3., 8.3. 10.4.	1a. Readings, lecture, discussion, expressive writing
	1b. Consider the "grand thesis" as a work of historian's creativity, e.g., The Frontier Thesis	1b. 5., 7., 8.2.2.	1b. Lecture, readings, discussion
2. To point out instances of creative activity in various historical times and places	2a. Recognize and discuss the creative activity and products in political philosophy, inventions, literature, organizations	2a. Throughout	2a. Readings, lecture, discussion, media
3. Encourage in the learner creative activity	3a. Use imagination to sketch in "blank spots" in historical accounts	3a. 5., 8., 10., 12.	3a. Discussion, in-class workships, exercises, brainstorming in writing and in groups
	3b. Forecast possible futures	3b. 8.5.4., 10.4.6., 12.3.7., 13., 15.	3b. Similar to above

OTHER:

3.2 Criteria Related Goals: Criterion: Pluralism

Criterion stated in goal form: To Encourage the Learner to Consider the Variety of Perspectives, Experiences and Persuasions that have an Impact on Society

SUB-GOALS	OBJECTIVES	CONTENT	INSTRUCTIONAL
(What the course intends) to do.	(Objective: what the learner) should know, be able to do, experience, as a result of taking the course, i.e., knowledge, skills, values, ethics.	(Refer to Course Outline)	Procedures/Materials
1. Introduce the concept of pluralism and study it in historical times and settings	1a. Define pluralism, cite historical instances that illustrate issues of pluralism.	1a. 10.1.3., 10.2. 10.3., 10.4.	1a. Lecture, discussion, readings
	1b. list and evaluate arguments for and against pluralism as public policy and a societal value	1b. 10.5.	1b. Discussion, debate, essay writing
2. Show how persons and groups other than those of the dominant group contributed to United States	2. Recount examples of contributions of women and minority groups and individuals	2. 2.10, 15.	2. Lecture, discussion, readings Writing assignment
3. To introduce the history and issues of dissent in the United States	3. Describe dissent, give examples, advance and evaluate arguments for and against it	3. 10., especially 10.1.3.	3. Lecture, discussion, debate, readings, writing

OTHER:

3.3 Other Goals and Objectives

GOALS	OBJECTIVES
1. To encourage learners to think in terms of the future as well as the past and present.	1a. To trace developments from the past into the present and forecasts of possible futures.
	1b. To show an awareness of the concerns and techniques of future researchers.
2. To show, through analysis of historical periods, the interconnectedness and mutual influences of lives and events on the planet.	2a. To recognize and use imagery, metaphor and models that convey the sense of interconnectedness.
	2b. To recount examples of interconnectedness.
3. To encourage learners to become active learners capable of applying their learning to their own lives.	3. To describe and assess ways of applying and integrating learning into one's own life.
4. To introduce and explicate the historian's connotation of the concept world view ("zeitgeist") and relate it to individuals in today's world.	4a. Discuss and illustrate the concept world view and recognize the varying connotations, e.g., historian, psychologist, philosopher.
	4b. To explore and evaluate his/her own world view.

4. Texts and Other Instructional Materials

Required Textbook:

To be selected

Recommended Text(s)

To be selected

Other Instructional Materials:

Historical documents
Journal articles
Primary sources
Contemporary media
Film
Literature

5. Evaluation and Grading Plans

EVALUATION PLAN

There will be frequent evaluations of student work. Evaluation will include written work, and as appropriate, objective sampling for content mastery. There will be a steady effort to provide swift feedback. Learners will have options for re-testing and re-writing in order to apply feedback. A final examination will be designed as a summary and synthesis exercise. Each unit (3) will have an essay component.

Extra credit will be available for certain kinds of reading, activities, reports.

GRADING PLAN:

The grading plan, for example, would have components, weights, and a scale for determining letter grade equivalent for cummulative point scores like the following:

1. Basis for points:

1.1.	attendance (18 @ .5/class)	9
1.2.	unit examinations (3 @ 25 points each)	75
1.3.	assignments, exercises	25
1.4.	quizzes	26
1.5.	final examination	25
		160
1.6.	extra credit	15
	total possible	175

2. Letter grade scale (based on 160 points)

100% - 90% = A

89% - 80% = B

79% - 70% = C

69% - 60% = D

59% and below = F

6. Course Policies

At the beginning of a semester, assessment will be made of each learner's reading and writing skills for purposes of referral to developmental labs in reading and/or writing, arranging for tutorial assistance, or making individual arrangements for skill development.

Because much of the course involves in-class participation by the learner in the learning process, regular attendance is required.

APPENDIX R

FACULTY EVALUATION INTERVIEW PROTOCOL

INTERVIEW FORMAT FOR FACULTY

TIER ONE PROJECT

NAME_______________________________General Education Course_____________________

1. Did you find it possible to re-structure your course to make it truly intradisciplinary?__________How did you go about **doing this**?______________________

____

____

____

What intradisciplinary principles, or generalizations, or points of view, or value system did you include?____

____

____

____

____

____

2. Do you think your particular discipline has a distinguishable, definable mode of inquiry?________Can it be articulated to the students?__________Did it get included into the course outline and into your teaching?____________________

____

Do you think most of your students are now aware of this mode of inquiry?_____ __________If you asked them on the final exam to describe it, could they?

____

3. I suppose all teachers pay some attention to the implications of knowledge. Do you think there is a new and broadened emphasis on implications of knowledge in your course?____

____

Have you found that teaching for implications has made the course more relevent to students?____

____

Did you get much into the ethical implications of knowledge?_________________

Examples?____

____

____

____

____

Interview Format for Faculty (con't)

4. Did you find your course lent itself to the teaching of the aesthetics of knowledge?

Do you think all general education courses have a teachable element of aesthetics?

How did you bring in aesthetics into your own course?

5. What kind of writing did you have the students do in your course?

Was this appreciably more writing than you required for the course in the past?

Did you find you were actually trying to teach writing?

How did the FIPSE tutorial system work out in your course?

6. Did you do anything different than in the past in regard to reading within your class?

What, for example?

Did you find yourself trying to teach reading techniques?

Any success?

7. Does your course lend itself to teaching effective thinking?

Do you think what you did had much impact on the students?

How did you go about trying to teach effective thinking?

Interview Format for Faculty (con't)

8. Do you think creativity can be taught or released or elicited from the content of your course?______________________How did you go about it?

Does it just happen or can it be planned for and written into the course outline?

9. Pluralism has always been a big thing at LMC. Is it a big thing in your course?

How did you work it in?______________________

10. After this semester's experience do you think we have hit on the right criteria for defining a general education course?______________________

What would you subtract?______________________

What criteria would you add?______________________

Which ones would you modify?______________________

11. Did teaching for these criteria appreciably modify the amount of content you could cover in your course?______________________

What percentage loss would you say occurred?______________________

If some content is sacrificed, do you think the other gains justify the loss?

12. Do you think re-structuring your course to fit the criteria was a profitable professional experience?__________Where should we go from here on it?__________

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